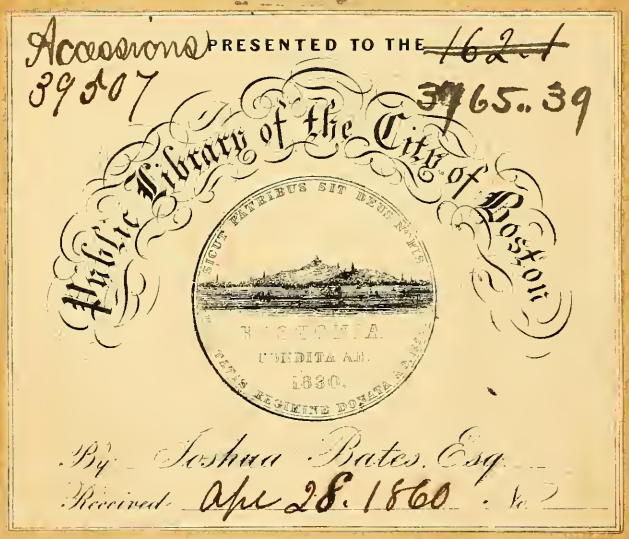
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A KEY TO THE ATTAINMENT

OF THE

FULL TERM OF LIFE.

A KEY TO THE ATTAINMENT

OF THE

FULL TERM OF LIFE;

SHEWING THE CAUSES THAT BRING HUMAN EXISTENCE TO A CLOSE SOONER THAN NATURE INTENDED.

By JOEL PINNEY, Esq.,

DEDUCED FROM HIS SEVERAL WORKS ON THE INFRINGEMENT OF THE ORGANIC LAWS.

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PREFACE.

Those only destined for the medical profession have hitherto adequately investigated the subject of human physiology. To a certain extent it should be studied as a branch of liberal learning in the higher schools by youth not intended for the medical profession. The lower classes of society, unaccustomed as they are to self restraint, are quite as much, or more, in need of a slight knowledge of their interior mechanism, and the various phenomena which ensue, and they ought to be indoctrinated as to the care of their health.

The Author aims not so much at teaching men what they do not know, as at reminding them of that which nature teaches them they ought both to know and to practise. He brings to their view, how they are gradually destroying

the elasticity of the vital economy, how health may be cultivated, and how sanatory difficulties may be grappled with, and so put men on the business of reflection. However doctors may disagree, he hopes his doctrines will demonstrate, that temperance and activity, which every man may practise, are physicians uniformly successful. His efforts are honestly intended to confer benefit on his fellow men; and if he do not inspire the vigour of health into all, he trusts none who may peruse these pages, will do so altogether in vain, or lay down the volume unconvinced of the necessity for a rigid adherence to the precepts it contains, or of the rationality and practical utility of the views which it sets forth.

Upper Norwood.
January, 1860.

HOW TO ATTAIN

THE

FULL TERM OF HUMAN LIFE.

CHAPTER I.

In the great market of human life deteriorated health and curtailed existence are the inevitable prices fixed for sensual gratifications, prices which alas! infatuated men too readily pay.

In England alone one hundred thousand human beings are annually sacrificed by ignorance of, or disregard to the laws of health, and in addition to these awful hecatombs, far more than a million of persons are suffering serious illness from the same cause.

Every illustration, every example, and every form of admonition and persuasion that could

possibly be conceived and applied by the most eminent writers, professional and unprofessional, have been repeatedly brought before the public in connection with the various infringements of the organic laws, which, from the earliest time to the present day, have caused an alarming reduction in the duration of human life. Age after age having passed away in continued intemperance, with a consequent abridgement of the term of existence, the question very naturally suggests itself, is it now in the power of man to alter this state of things? I answer, simply to iterate the ordinary doctrines of health, with cautions against deviating into paths of destruction which proved fatal to our forefathers, would, I fear, avail but little; for the truths of hygiènic, science, and the principles of long life have been hitherto preached as if to the winds. Every form of rational appeal that could be brought to bear upon the subject has been tried, and tried in vain!

The human mind appears to be utterly incapable of devising any plan that would effectually resuscitate that wise course of living which, in the primitive ages, secured patriarchal longevity. To expect, then, to succeed in an undertaking in which the greatest minds have failed—to hope to remove an evil which has been found too deep and too extensive for any remedy that individual

ingenuity could propose—this would, indeed, be presumptuous in me.

I shall not think the labour entirely thrown away, however, should my unassuming efforts lay bare to men's consciousness the vast amount of irresolution, which, as to the great bulk of society, has prevented the torrent of intemperance from being stemmed; should I but move some among the millions led by the force of mere blind habits, in the train of bad customs which are enfeebling the vigour and shortening the days of man, to bestow a few serious thoughts on their real condition and dark prospects, finding, on reflection, that their own intellectual powers, properly exercised, would be sufficient to comprehend, appreciate, and apply, the true remedy, and thus shield themselves against the abuse of the Organic Laws,—discovering, in other words, that they could themselves decide as well as any Medical man what is and what is not according to those laws, obedience to which can alone effect the preservation of health, and prolongation of life, they would, like sensible men, prefer the better part, and no longer subject their bodily welfare to the continued jeopardy of absurd fashion and tyrannical custom.

With the view, therefore, of promoting this self-emancipation, I proceed to lay down a plan for

attaining the full term of human life, a plan which involves the only remedy that could triumph over inveterate habits, or reverse this long settled, sensual, and indolent course of life. The sorrow is, that we have yet to begin a reform which, ages ago, might have been propounded to the people of this country, and which, earnestly pleaded and forced on public attention by proper authorities, might have secured to self-destroying millions, the sure, though the only chance of unfailing health and length of days.

It must be evident, in the first place, to every rational being, that a total return from our present corrupted condition to that of nature, cannot be effected in a day. It implies a complete revolution in use, which is "second nature," as well as in opinion. The experiment proposed, therefore, could only be fairly tried by a spontaneous rising of the whole world, unanimously determined to root up those appetites that have perverted the produce of the earth, and to explode those habits of luxury and indolence which have, by almost universal consent, "grown with our growth, and strengthened with our strength," and been adopted and sanctioned in every grade of society, till they have well nigh become an integral part of our animal and physical constitution.

In proportion as the human body approaches

to a state of perfect balance in point of organic action, the term of life is extended: in proportion as that balance is disturbed, life is shortened. Were our physical and mental properties in just equipoise, life would reach the utmost limits designed by nature; but, as this rarely happens in the present state of what is called civilized society, human life seldom numbers the full measure of its days; and generation after generation, though born with the elements of old age within them, voluntarily limit themselves to a less term of existence than that they might otherwise attain to.

Self-denial, which would go far to avert these evils, we say we cannot exercise, although the proper course to be adopted stares us as it were in the face. Sickness and suffering, to which we unthinkingly subject ourselves, we designate helplessness, notwithstanding they arise out of customs which we might resist, even though they seem to possess inducements too powerful to be resisted.

This picture of human degradation, though true to the very letter, excites but little resolution in the sensual and indolent to renounce their fatal practices. Now, to know what will undermine our health and destroy our lives, avails but little, if we take no pains to trace the

operation of these fatal causes, nor adopt any means to prevent them.

To what are we to ascribe this violation of the laws of our common nature? Are we afraid to think for ourselves? Are we chained down by the influence of fashion, or resistlessly engulphed in the vortex of dissipation? Let the following doctrines, put forth in the writings of medical men, resolve the humiliating problem.

One author says, that, "when men have long been devoted to indolence and luxurious habits, they will become so hardened in their sensualities, as to find it difficult to yield to any argument for the adoption of an opposite course of life, however desirous they may be to relinquish their destructive habits; and will prefer continuing their perverted course, although they have before their eyes a clear prospect of being cut off in the flower of their days." Another author says, that "there are but few individuals who have the power, and very few the resolution, to put in force the various preventive checks of disease; and the greater mass of society must therefore be content to make the best compromise they can with those evils which surround them. In short, they must rather attempt to mitigate those ills they cannot shun, than hope entirely to prevent their recurrence." A third author says,

"In the present state of civilized society, with the provocatives of the culinary art, and the incentives of highly seasoned food, brandy, and wines, the temptations to excess in the indulgences of the table are rather too strong to be resisted by *poor human nature*." A fourth author goes so far as to say, that "man is so much the slave to his passions and appetites, that, were a prophet to rise up from the tomb and warn him against indulging, he would not be listened to, or at least his advice would not be followed; and the only thing medical men can do, is to point out, as far as possible, such antidotes to the effects of repletion as experience can suggest, abandoning entirely the hope of weaning mankind from those habits to which they are bound by adamantine chains."

Avowals like these, by the very men to whom the community look up for security against dangers resulting from the depraved habits of civilized life, quiet all scruples against intemperate living, and they are calculated, not only to do no good, but to do positive mischief; for they lead to the erroneous and degrading conclusion, that the actions of men are not under their own conduct, thereby giving almost a direct licence to sensual and indolent gratifications. Every attempt to reform or improve, which reason or experience may suggest, is discouraged, and

implicit obedience to prescribed authority enforced. They would have us believe that the position in which we are placed is like that of a man in a lethargy, who desires that he may be allowed to dose on: he apprehends no danger, although danger may be imminent; and he is annoyed and vexed at every attempt to rouse him. They would have us believe, that men, hurried away by their passions, or listlessly regarding the course of ruinous events, lose the very power of reasoning. As well might it be said, that reason permits herself to be governed by the hand when it is writing falsely, or by the tongue when it is speaking profanely. No, the only faculty that *could* avert these evils is reason.

"If false facts," said Lord Bacon, "be once on foot, what through the neglect of examination, the countenance of antiquity, and the use made of them in discourse, they are scarce ever retracted,"

What, then, shall we say of reasoning, founded not on facts, but on *mere assumption?* Time itself is no test of doctrine, nor whole ages of ignorance any evidence of the real value of a system. Truth and nature are congenital and contemporaneous.

Many persons consider the study of health

as much above them as that of the vicissitudes of the atmosphere; some think positive illness the only occasion when health should be studied. To be willingly ignorant of the laws of health is unworthy of a rational accountable being; to neglect them, when known, is an act of awful ingratitude.

Since the law classes under the head of "lunatics" all persons who cannot superintend their own commercial and financial affairs, under what other head should we place such persons as are manifestly incompetent to take care even of their own bodies? The Divine Architect never designed that man should come into the world incompetent to regulate his own machinery, and the idea that the Almighty's works cannot be perfectly preserved without the interference of medicine, borders almost on impiety; for every reflecting person must be struck with the admirable correspondence of the structure of the living body as a whole, and of the senses and functions in detail, in relation to external nature, as capable alone of insuring health and long life.

Well-informed men are too frequently but little acquainted with the general principles of health and disease, with the commonest facts in physiology, or even with that which most nearly concerns them; namely, the proper selection

and adjustment of food, drink, and exercise. Why is this? Simply because they know nothing whatever of the physiological conditions upon which life depends; nothing whatever of the several actions which constitute life; nothing of the intimate structural connection of the vital organs. They allow others to decide what is good or hurtful to them, and thus blindly subject themselves to a degradation of their nature.

How common a thing it is, when a person, totally unacquainted with the organic principles of his animal structure, and perhaps equally ignorant of the cause from which his complaint arises, is disordered, to hear persons probably as uninformed as himself of all that concerns the nature of the human frame, giving the complaining party the following advice, "Take a good dose of physic, and you will be well in the morning;" and how frequently is this sage advice followed, without the slightest knowledge, or indeed concern, respecting the active properties of the medicine taken, or the consequences it may produce; properties and consequences which if they had any knowledge of the interior man, both adviser and patient would shudder at.

Now, "a good dose of physic" means a drastic, or violent purgative; and no matter what may be the state of the body, the gratuitous advice

is too often taken at all risks. The pill-swallower may be conscious of having neglected to take physic, or to make any other provision for the due evacuation of the bowels; and, thinking to make up by present quantity for past neglect, he frequently, by the very potency of the medicine, brings upon himself dangerous evils of long continuance, and not seldom eventually fatal in their results.

The hacknied observations, that none but those who are used to touch this "harp of thousand strings" should interfere with it less they put it out of tune, means, if it means any thing, that doctors alone can uuderstand its movements; and it cannot be denied that some of them often *play* upon it to a pretty tune! But let me ask, how, if non-medical men are for ever to remain strangers to its laws, are they to obey them? If they do not know something of the construction and the active principles of the body, how can they know what to do, or what to avoid in case there be any derangement of that body? Unless, indeed, they submit to be degraded into living automatons, to do this, or refrain from that, just as their medical man chooses. We are considered capable of investigating nature, so far as our faculties will carry us. We study the regions of space, and there, to our astonishment, view worlds on worlds,

and systems on systems, all maintaining their distances from each other, fulfilling the laws of their respective revolutions. May we not ask, then, who has drawn this line of demarcation as regards our study of the human frame, and said, Thus far shalt thou go, and no farther? Is it He who sits upon the circle of the heavens, and who has made, and preserves, and regulates the whole? No! The Almighty, in his unbounded goodness, has thrown the whole range of nature open to our view, and invites our investigation, whether it be upon our own frame, or any other part of his vast domains; and, if, by the study of nature generally, we increase our knowledge, expand our minds, and raise our thoughts "from nature up to nature's God," why should we not more particularly direct our inquiries into that masterpiece of his own handy-work—Man; a knowledge of which, besides making a valuable addition to our general knowledge on other important subjects, would afford security to our own health and life.

Does a person wholly decline the study of music, or of the languages, or of any art or science, because he dispairs of becoming professor of it? Is the study of astronomy to be neglected, because we may not all acquire the knowledge and penetration of a Newton? Or are the Commentaries of Sir William Blackstone

to be read by those only who are intended for the profession of the law?

Till the intellect, therefore, is purified, till it is rendered sufficiently powerful to afford a fulcrum for the play of a lever strong enough to remove the besotted credulity which has so long made havock of civilized society, no permanent good will be done. It may be said that any further attempt will be but a mere beating of the air; since, as we are often told, every conceivable thing necessary to be done, has been done for the improvement of health and the melioration of disease, and yet without success. There are, however, many persons to be found who would smile at such doctrines, if they could but be assured that there yet remained an antidote by which to shape their dispositions, and rid them of the tyranny which enslaves their judgment.

That my plan will *ultimately* be appreciated I am not unwilling to hope. To cherish sanguine expectations of *immediate* success, when neither opprobrium nor sense of duty to themselves, can constrain men to preserve themselves from an arranged set of false notions, constituting a system of error which brings punishment upon us at last, with the most alarming mani-

festations, would no doubt, be little less than infatuation.

By culture of mind, man, we know, may bring to bear his faculties so as to enable him to master all the sciences and every branch of literature, ancient and modern ; and may become an accomplished and an enlightened example of his species in every point of view, except that which regards himself and his physical nature and well-being; but it never seems to have occurred, even to educated persons, that the composition of their own bodies, and the functions of their own organs, were subjects worthy of study or of self-examination, even with reference to securing bodily health, so essential as that is to every other enjoyment. Now what are the dangers which result from thus being left in ignorance of the laws of health and life? I answer,

Grievous and lamentable bodily errors are committed.

Disease and suffering are needlessly incurred.

Premature and preventible mortality ensues which might have been diminished or altogether prevented.

The members of the medical profession are of necessity obliged to make themselves acquainted with the anatomy and physiology of the human frame, that they may understand its pathology and the diagnosis of disease, and thus, with their materia medica, accomplish themselves for their profession: but I would earnestly wish to impress on the minds of my readers the necessity, not of such a complete knowledge of these subjects as the medical profession, but require such a degree of knowledge only of the organization of the human frame, and of its genearl functions with the laws of health as will enable persons to take a rational care of their health, and avoid those errors of conduct which tend to induce disease, and shorten life.

Such knowledge I consider to be most important to every individual in all grades of society, including those termed the "*Working Classes*," who live by the labour of their hands, and to whom good health and the ability to labour may be considered to be of the first importance.

I now respectfully submit to my readers, and to the public, a faithful, and, when duly observed, an UNFAILING REMEDY for the almost universal indifference and apathy of men on this vital subject. That *remedy* is, simply *to make themselves acquainted with the laws which regulate health*

and life, and with what, in regard to modes of living, will hasten dissolution, and what will retard it,—an attainment which is entirely within the power of every person of ordinary capacity.

No doubt, to speak of a knowledge of the organic structure and the functional laws of the human body, sounds, in the ears of non-professional men, exceedingly formidable; so much so, that many are probably induced to believe a professional education, to be indispensable to the due comprehension of the subject. The imagine also, that a perfect acquaintance with the complexity of their structure, is absolutely requisite. This erroneous notion creates such utter repugnance and alarm, that many remain throughout their whole lives in a state of total darkness in regard to the condition on which health and life depends: whereas, no more medical knowledge is necessary, I repeat, than any ordinary educated man may readily acquire, by simply paying attention to his own health, and observing the means by which that of others is improved or preserved,—any one may soon obtain such an acquaintance with the laws of hygiène, and even of physiology as would enable him, with reasonable precaution and attention to ward off and prevent the recurrence of disease.

To arrive at a thorough scientific knowledge

of the organic constitution of our bodies, requires, no doubt, a profound study of anatomy, physiology, and chemistry; but this extent of information is not at all requisite in the non-professional portion of the public, in order to enable them to preserve themselves in health. A very plain practical education, and that share of ordinary apprehension which falls to the bulk of mankind, are quite sufficient to enable men to discriminate between what is good for the living body and what is injurious to it. To make themselves thus competent, men have only to read over a few times with attention a description of the infringement of the organic laws, and the precepts laid down in this work.

The operation of this *remedy* rests not upon technical difficulties or subtle arguments, but plainly and simply upon the practical good sense of every man not constitutionally incapacitated, who, with a very little study, will perceive its certainty to be almost as clear as that of any mathematical demonstration. And when the nature of that *remedy* is distinctly understood, and a fixed determination to follow it, lost indeed must he be who can deliberately exceed the bounds set by nature to protect him from those diseases, and that death, which, for ages, have caused such havoc with human life, and which

must sooner or later overtake him if this remedy be neglected.

The only matter of surprise, whenever it is comprehended, will be, how it could have happened that individuals never before thought of so effectual a criterion, by which they might have judged of the danger they incurred, and have avoided the evils which so certainly arise from the immoderate, unnecessary, and injudicious use of food and drinks; and the only candid account of such inexcusable negligence would be that the subject had never been fairly brought before them, and that they could not be held blameable for not adopting that which had never presented itself to their notice!

Medical writers say, even if non-professional men were to obtain an acquaintance with the animal economy, of what avail would it be to them? If sick, they must of necessity have recourse to medicine: why perplex their minds with inquiries which, under such circumstances, would be but of little or no use to them?—Plausible as this reasoning may appear to be, it is my duty to show that it is untenable and fallacious.

On men attaining this important information,

they would at once become competent themselves to obviate the prevalent injurious practice of constantly taking physic and contaminating the vital stream upon every trifling occasion, when in most instances (they found by their newly acquired knowledge) that a day's abstinence or the judicious lessening of food and drinks, or a little more air and exercise would, without other means, effect all that might be necessary.

The man thus instructed would know, that health cannot exist unless the organs of the body are kept in perfect order; that continued excitement by excesses of any kind, subjects them to inevitable derangement; and that to surrender the frame to indolence and inactivity, depresses the energy of the circulation; causes the blood to creep languidly through the veins for want of pliability in the limbs; impedes the freedom and continuity of respiration; retards, impairs, and, consequently, weakens the whole system; and ultimately brings on disease.

He would know the direct influence exercise has in the prolongation of life, and that the want of it invariably subjects the body to disease and sufferings. That the formal promenade is not the movement calculated to equalize and distribute the fluids to all parts of the body, with the vigour which nature requires; that it

fails to bring into action as exercise ought to do, not only every limb and muscle, but also to stimulate and assist all the organs of digestion: and that, for want of these efforts, the nourishment taken cannot be duly assimilated to the blood.

He would know the penalties of lying in bed enveloped in corrupted air for several hours beyond the time required by nature for repose.

He would know that the eating of a large quantity of meat and other foods, and the drinking much of stimulating fluids would but goad on the liver to supply an excess of bile, the skin to throw out superabundant perspiration, the lungs to throw off undue moisture, the kidneys to give out too much urine, and the fountain of the mouth to produce a needless quantity of saliva; and, of course, he would know that all these secretions must be supplied from the blood, so long as it could afford the supply. He would further know, that, when the blood had at length parted with as much fluid as it could spare, the mouth, as well as the liver and the other organs, would thirst for more, and become uneasy because they could not get it; he would know, moreover, that over-feeding and drinking, acting upon enfeebled organs, so overpower them, that the channels provided by nature prove unequal to

carry off the excess thrown into them, and that the digestive organs, thus stimulated into unnaturale xertion, after many vain though laborious efforts, give way under the pressure; the result being rupture of blood vessels, apoplexy, paralysis, and other causes of sudden death.

He would know, that an iritable disposition, or anxiety of mind, disturbs digestion infinitely more than any fatigue of body.

And, finally, the knowledge of all these would induce men to put their courage to the test, whether they would continue a life of indulgence and inconsideration, and consequently remain enemies to their own well-being; or resolve to follow the rules of nature, by which they might escape disease, and insure length of life. This, and nothing but this, is the medical knowledge really worthy of attainment.

It may be said, "that the *remedy* I propose might be practicable with the educated and well-informed, but how should the lower classes of society be able to understand such matters, seeing they possess little or no learning at all, especially of a medical or an anatomical nature?" To this I answer: If the lowest class can read

Temperance Journals, as it is known they *do*, what is to hinder them from reading and understanding books written in as clear and comprehensive a manner? Many of the lower grades of society, it is true, formerly had no education, but the establishment of National Schools has entirely altered the position of this section of the community, and very few of the poor of the present day are to be found without some literary cultivation. They can all read and write; and *that*, with a firm and attentive mind, is quite enough without the aid of medical learning, for the attainment of the object I propose. That in every attempt success would be certain to follow, securing each man as it were by a talismanic touch from ever again exceeding the just bounds of temperance is too much to expect. The process of reformation would no doubt require sincerity and firmness of purpose; but of this I feel thoroughly persuaded, that the course suggested would, in every instance, cause such enquiry and reflections as would be likely to deter men from any longer deliberately consigning themselves to the perpetual danger of being cut off from the world at a moments notice; educated men, no doubt would explain the laws of health to their less educated neighbours, and even among the very lowest classes, those who *could* comprehend, when they found the benefits

of the plan, would be but too happy to impart the knowledge, to which they themselves owed so much, to others who require it.

The following is a condensed outline of so much of the physiology of the human body as will facilitate the object of those who may determine upon making themselves competent to their own preservation.

The most important principles of life are *Contractility and Sensibility.*

Contractility is the property of the muscles. A muscle acts only by contraction. When the exertion ceases, it returns by relaxation to its former state, like the springing back of India rubber after extension. A finger is neither bent nor straightened without the contraction or dilation of two muscles taking place. This is the nature of the muscular fibre.

Sensibility belongs to the nerves, which are slender cords, extending from the brain and spinal marrow. Twelve pairs form the former, and thirty-four the latter; these send out branches so numerous that it is said

we cannot touch with the point of a pin a spot that has not its nerve.

To the action of the one or the other of these principles every change that is effected in the animal system must be referred; and it is through their immediate operation that all physical functions are performed.

The nerves inform the brain that one thing is sweet, a second bitter, and a third nauseous. It would appear, therefore, that the action of the brain and of the external senses is reciprocated by the nerves. The brain occupies the whole cavity of the scull. It is divided into two parts. The upper and frontal part is called the cerebrum; the other, the cerebellum.

The spine, or back bone, is a chain of joints of wonderful construction, composed of twenty-four separate pieces, each of which is called a vertebra. It is firm, yet flexible; firm, to support the erect position of the body; and flexible, to allow of the bending of the body in all degrees of curvature. The

back bone contains a fibre, or tube, to convey from the brain the spinal marrow; a most important fluid, on which all voluntary motion depends. This substance, which is a continuation of the brain, is of the first necessity to action, if not also to life itself.

The circulation of the blood is performed by means of the heart and blood vessels.

The heart is a muscular organ enveloped by a membranous sack, called the perecardium. It contains within it two distinct cavities, called ventricles; with an entrance to each, called auricles.

The blood vessels, which are hollow tubes, possessing a contractile power, proceed from the heart by two large trunks; one called the aorta, and the other the pulmonic artery. The blood has to perform two distinct circuits; one of which pervades the whole system in general, administering nourishment and support to every organ and the other proceeds to the lungs, and divides first into branches, one going to the

right and the other to the left, and then into an infinite multitude of smaller vessels, dispersed through the lungs to the arteries. After being thus dispersed over the system, the blood is again collected by another set of vessels termed veins, which pour their contents back into the heart; the arteries carrying the blood, and the veins returning with it, accompanying each other. The capillary system consists of very minute intermediate vessels between the arteries and veins, forming, by their assemblage, an inextricable network, which constitutes the parenchyma of our organs.

The digestive apparatus consists of the mouth, the stomach, and the intestines. The teeth, tongue, jaws, and saliva, perform the offices of mastication. The food then passes the epiglottis, down the gullet, to the stomach. The saliva is an important agent in digestion. It is secreted in the glands, which pour it into the mouth through a small tube. When the food reaches the stomach, the work of digestion commences, and it is thereby converted into a mass called

chyme. It has now become a theory that the food is digested by gastric juices. At the orifice of the stomach, there is, as before observed, a sort of valve, called pylorus. Some say that this valve, this door-keeper, will not allow the chyme to pass without being perfectly digested, but contracts at the approach of undigested substances.

Every one knows that the act of inhaling air is termed inspiration; that of sending it out, expiration. The organs for this purpose are the lungs and the windpipe; the latter extending from the mouth to the lungs. Larynx and trachea are but other names for the windpipe; and pharynx for the gullet. The process of respiration involves chemical, mechanical, and physiological principle. The lungs occupy the chest. Of this, the breast-bone forms the front, the spine, the back; attached to this bone are twelve ribs on each side. These are joined by muscles, which are supposed to assist in elevating them in the act of breathing. The diaphragm is a muscle of great power below, by whose action alone common inspiration can be performed.

After deliberately reading this description of the internal machinery of man, in whose wonderful composition nothing clashes and nothing is out of place; nothing is defective and nothing superfluous; nothing too slow and nothing too rapid in its movements; can any human being vainly suppose, that the functions of *his* body are progressing in that precise state, while he is habitually taking in improper food, with copious draughts of wine, spirits, beer, and such like stimulants and excitants, and is otherwise abusing nature? No doubt, many do persuade themselves that they believe it, though without bestowing a serious thought as to

> "What slight neglects, what trivial faults destroy
> The hardiest frame."

Here, then, let the reader pause, and appeal to his own judgment, though he possess no knowledge of the structure of the human frame, nor indeed understands, or but faintly, anything more than that this intricate machinery, in its natural working, causes the food and drinks which enter the stomach to be conveyed through various processes to their respective destinations. Let him ask himself, whether, as it is evident the action of the machine causes health *only* when we supply it with foods and drinks according to nature, foods and drinks that are injurious, and which have obtained admission

into the stomach, will not unnaturally either hasten or retard the movements of the machine? If so, then the more prodigally we expend the vital properties of our organs, by intemperance in food and drinks, the more rapidly shall we wear out the constitutional powers of replenishment, and exhaust the limited stock of life.

From the commencement to the termination of life, we daily impose upon the stomach food and drinks too abundant, besides much that is not comformable to nature. In childhood, it is loaded with indigestible pabulum; and then attempts are made to rectify the mistake by the administration of medicine, which not unfrequently makes matters worse. This delusion, this total want of judgment, is proverbial, and is universally exemplified.

Many persons live under the extraordinary impression of suffering from abstemiousness, though actually living on the borders of excess, which places their lives in continual danger. This notion arises from a depraved appetite, and from wilful ignorance of their own structure and constitution! Persons who are evidently suffering from weak digestion will carelessly take food fit only for strong men in rude, robust health. Is it at all extraordinary, then, that they should fall ill? Yet men will consult

only their own sensual tastes and gratifications, seldom bestowing a thought as to how this improper diet is to find its course through the intricate machinery of their body, already, perhaps, deranged* by previous improprieties.

Let young men look at their dissipated friends, and witness their lethargic apathy—their flabby corpulency, their shrunken limbs, their bloated or emaciated countenance—and, by these fatal signs, be warned from the precipice in time. Civilization and luxury are at their headlong speed. We run with them; and, as there is no escape for the determined sensualist, he joins in thus galloping out of life, and so pays the inevitable penalty of the multiplied mass which he thinks fit to swallow. Can any one imagine himself sane, who, under such a course of living, expects ordinary longevity, to say nothing of patriarchal age?

To afford the reader an opportunity of judging of the capacity of the stomach, I have, in order to obtain as correctly as possible, the exact quantity and bulk of ingredients composing an

* Dr. Prout says, "The gay and thoughtless little think of the consequences of their dissipation, and that they are, in fact, to use a mercantile simile, drawing bills at twenty which will certainly be demanded at some future period of their lives with *fearful interest*."

ordinary meal, as partaken of by the most numerous class of persons in the upper and middle ranks of life, witnessed the weighing of the quantities of the articles at dinner, and also of observing their bulk. The result was as follows :—

	oz.
Soup with Bread	4
Fish with Sauce, Bread and Pototoes	4
Meat with Vegetables and Bread	6
Poultry, Tongue, Vegetables, and Bread	4½
Pastry and Jelly	3½
Cheese and Bread	2
Preserves, Cakes, and fresh Fruits	3
Water, Beer, and Wine (during dinner)	15
Wine after dinner (half a bottle)	16
Coffee and Toast	7
	65 oz.

Such is a faithful description of a " plain" modern meal, as eaten by the upper and middle classes of society in this country, and by other respectable families, composing, perhaps, half the population of the land.

With special reference to the curtailment of human life, I earnestly entreat serious attention to the important questions, which, as suggested by the meal just described, I am about to put; and, before my readers answer them to their own consciences, I beg that they will divest their minds of all previously-formed opinions, and of apparently established usages.

It appears then, that, at one meal alone, the food and drinks taken daily, amount upon an average, to 4 lbs. 1 oz.; and contain a bulk that would fill a space of three quarts.* Now physiology informs us that the natural capacity of the human stomach, without being over-distended, will admit little more than three pints, and that it is not able to digest at one time more than 2 lbs. of food, composed in due proportions of meat, vegetables, and fluid!!

When it is considered that the smallest particle of matter beyond what the springs of animal existence are able to resist, cannot remain in the system without injury in some way or other, what are we to expect from so formidable a redundance of substances being daily thrown indiscriminately into our stomachs,

* A Modern Dinner.—The world's mode of living is preposterous; mixtures and spices and wines are the ruin of half the stomachs in the world. Just see: you take at a dinner party soup (say turtle), a glass or two of lime punch, perhaps; turbot and a rich lobster sauce, with, it may be, say, an oyster paste, or a sweetbread, to amuse yourself with, while the host is cutting you a slice of Southdown haunch; this, with jelly and kidney beans, is set in a ferment with a couple of glasses of champagne, to which a couple of glasses of hock or sautern are added: a wing of a partridge, or the back of a leveret, softened with a red hermitage, succeed —then you at once ease and chill your stomach with a piece of iced pudding, which you preposterously proceed to warm again with a glass of noyeau, or some other liqueur: if you are not seduced to coquet with a spoonful of jelly in addition, you are certain to try a bit of Stilton and a piquant salad, and a glass of port therewith. A dessert, port, sherry, and claret, fill up the picture. Now, I ask you,—he continued, warming, with his description,—if this is not about the routine of the majority of dinner parties one goes to? one man may give ox-tail for turtle, or another venison for mutton, but such is the usual order.—A Patient of the late Priestnitz.

making a bulk frightfully beyond the natural capacity of the digestive apparatus?

Dr. Christison says, "Distention of the stomach from gluttony sometimes causes sudden death, by inducing apoplexy, which is commonly of the digestive kind; that is, without rupture of blood vessels. Death from distention is the consequence, not always of apoplexy, but sometimes also of an impression of the stomach itself. In other causes of death from rupture, the laceration is caused by the accumulation of gases arising from depraved digestion."

The circulation of the blood is hastened beyond its natural speed. Now this, in itself, is of most dangerous tendency to health and life; but while knowing this, do persons sufficiently consider that this over-burdening of the stomach actually stops the digestive organs from performing their functions in time to propel forwards the excess thrown into it; and that this excess must be forced on unnaturally in portions of the alimentary canal through vessels of fixed dimensions?

In this surplus lies the danger; for the liquid portion of it is forced unnaturally into the small intestines, and all the fine vessels and arteries of the abdominal system are thus choked; all

the requisite canals which the mighty hand of benevolent Nature has formed and disposed in our most astonishing frame, are overburdened and stopped up, and the current of the blood itself is intercepted. Who can be surprised, then, at the rupture of blood vessels in the brain, causing instant death? Who can be surprised at the overstrained vessels of the body giving way, and leaving diseased deposits, causing calculi and all manner of disorders, and exposing the delicate membranes of the brain to an unhealthy and perilous excitement? Do men who act in this way ever reflect that they are putting their lives in constant peril?

"Apoplexy kills as sure
As cannon ball, and oft as soon!"

We see, then, the wonderful processes of bodily functions going on within us for the preservation of the individual. In a disturbed performance of these functions, does disease consist. Indolence and intemperance cause disturbance. A free, regular, and natural performance of the functions constitutes health. Activity and temperance cause them to be in continual harmony. Behold, then, the alternative which presents itself for our choice,—disease and premature death, or health and long life.

By the mere unassisted disorders of nature

human life is rarely abbreviated. Ignorance of our bodily construction, and thoughtlessness of the means of preserving it, are the main causes of shortening our existence. And if, either from ignorance or carelessness, or from the desire of present gratifications, we will not take the little trouble that the preservation of health, and the prolongation of life requires, we are ourselves the authors of those abbreviations of existence under which we suffer; and the Coroner's jury might bring in a verdict against us of slow suicide, committed under the influence of habitual insanity.

To those, however, who, through a sound judgment and the matured strength of their constitution, have been able and wise enough to lay in early manhood a foundation which has rendered them impervious to the attacks of disease, so that they may travel through life with perfect composure, till they reach old age; on which foundation they rely for their securing to themselves the utmost expansion of life their system and powers will allow of, but who yet consider that, having *so fortified* their constitution, they are proof against all danger from indulging in their declining years in a more generous diet,—to all such persons, I would earnestly offer this caution, that they cannot be

too watchful at this critical stage on the road of existence. One injudicious meal; one overpowering stimulant; a single incautious potent excitement, may, in a moment, sever the attenuated thread of life! The only security on which they can safely rely to sustain its vigour until the night of life has fairly set in, is a settled, fixed relinquishment of all that tends to force life beyond its weakening strength. By some persons it may probably be asked, How are we to ascertain this nice point? I answer, simply by an unerring observance of the natural economy of the human body, and as life progresses, of its *receding* powers.

To lengthen life being one of the first feelings of our nature, should it not be the first consideration with all of us to avail ourselves of the only way to obtain it? The methods are plain and easy to be understood. Nothing is necessary beyond common observation, in order to appreciate them, and firmness of purpose to carry them into effect. And he who will not give himself the trouble to weigh them with attention, must be contented to remain in ignorance of this most important branch of knowledge, and to expiate his neglect in many sufferings and a premature death.

"Let pain deserved without complaint be borne."

Inattention to this advice may, I fear, be traced in the death of the great Warrior of the 19th Century, which the whole nation has had to deplore.

As his Grace the late Duke of Wellington attained to an age beyond that which is regarded as the extent of the ordinary duration of human life, it was not, I suppose, thought necessary to raise a question as to the exact cause of his Grace's decease. It is true that 83 years is an age which many persons do not comparatively arrive at, but that is no argument why his Grace, who, it appears, had been provident in regard to his health, should not have lived longer; for it must be borne in mind, that, in some instances, persons live to 100 years and upwards in perfect health of body and of mind. And, indeed, any person acquainted at all with the human frame, and with the organs and functions of the body, would know that the death of a person, though well-stricken in years, who the day before was in apparently sound health, could not reasonably be set down entirely to nature.

The public journals stated that the Duke had latterly indulged somewhat freely at his meals, and that the day previous to his decease he partook of a hearty dinner of venison. Now, he died of a disease which, I have just observed,

often strikes old age fatally—epilepsy. Is there not ground, then, for apprehending that in all probability his Grace's death was caused by a paroxysm of the morbid appetite for food, which at an advanced period of life it is especially necessary to guard against. Had his Grace rejected more aliment than the powers of a declining digestion could have managed, is it not quite possible that he might have survived longer?

Must not some such reasoning as the following frequently occur to the minds of thinking men, as they pass on in life daily taking table luxuries and intoxicating drinks? "Well, how exceedingly strange it is, my friend, Mr. ——— has died suddenly! Mr. So and So went off in a very similar manner. And there is Mr. ——— who has been lying on a bed of sickness with a liver complaint for a very long time, and I'm told he cannot possibly recover. Neither of my poor friends was an old man; they were both in good circumstances, and always appeared to enjoy themselves. Indeed, I have frequently met them at convival parties—at dinners, with good wines and liquors, in the moderate enjoyment of which I have often joined them. They kept good tables themselves, and I was frequently their guest; they often visited me in return, and I used to be delighted with their high spirits and unfailing

vivacity. In short, we were always happy. It is true, now I call it to mind, that I did hear them now and then complain of little weaknesses, headaches, and the like; but these were trifles, and were looked upon as arising from causes incident to human life, and over which we have no control. For myself, thank God, I am strong and hearty; though, of late, I think I have felt occasional pains, which I was formerly a stranger to,—and my digestive powers have, I must own, lost some of their force. The little headaches and nausea with which I am also troubled, are things I used to be free from. And now I bethink me, I have lately thought I bore an appearance of too full health, looking a little like determination of blood to the head. My two friends have died early, and my third is given over; my own way of life has been, and continues to be, very similar to theirs. Is it prudent to proceed? Is there no danger, after all, of living too fast? Is it not just possible that the free use of table luxuries, and these alcoholic liquors, may in a moment terminate my existence, and lay me in the grave with my poor friends?"

Let me assure my readers that this little soliloquy is true to the very letter—is not partial, not casual, not accidental, but common—applying everywhere, in every neighbourhood and in every connexion, look which way you will.

CHAPTER II.

THE CAUSES THAT BRING HUMAN EXISTENCE TO A CLOSE SOONER THAN NATURE INTENDED.

"Truth will ever be unpalatable to those who are determined not to relinquish error."—MONTAGU.

He who impugns the prevailing mode of living as tending to produce disease and shorten life, and who points out the path ordained by nature as the only road to health and prolonged existence, lays himself open to no small share of reproach, not because his accusations on the one hand, and his precepts on the other, are deemed unfounded, but because he exposes to their own consciences the inconsistency and weakness of those who, in a matter of the most vital concern, habituate themselves to the violation of rules the authority of which they admit to be indisputable. This enigma will allow but of one solution; namely that men make their reason subservient to their appetites; till at length they come to regard

immediate gratification as the highest good, and scruple not to indulge in any thing that inclination calls for, without regard to consequences.

" Unity of opinion," says the sententious author of " Lacon," " is indeed a glorious and desirable thing, and its circle cannot be too strong and extended, if the centre be truth ; but if the centre be error, the greater the circumference the greater the evil; and the strength of the parts serves only to give an energy to be execrated, and a durability to be deplored."

Whenever a man renounces the guidance of reason, and gives himself up to an implicit faith, he becomes the proper prey of imposition, and, having closed his eyes to the plain indications of nature, is the easy victim of almost any absurdity.

In the ordinary affairs of life, if a man from the force of example pursue an erroneous course, he may, upon discovering his error, in many instances repair the consequences. Not so with health. When the principles of life have for a time been tampered with, evils result which but seldom admit of remedy; and by sad experience we find what slight neglects, what trivial faults, destroy the hardiest frame.

Life is characterized by a constant wasting of

the body, and as constant a reparation from the blood; the former occasioned by bodily exertion; the latter, by food and drink. The liability of the human frame, therefore, to alternate depression and excitement, and consequent derangement of its functional powers, rests mainly with ourselves. The material point for consideration, then, appears to be, what *are* infringements of the organic laws? They are, the taking of food in quantities exceeding the waste of the body; inactivity; lying long in bed; living in hot rooms; turning day into night; respiring impure air; infrequent ablution of the entire body; inebriety; indulgence of the passions; and the frequent swallowing of drugs, called medicines.

All these have a greater or less influence, conjointly or separately, over our passions, inclinations, and desires; and they occasion mental inactivity; feelings of lassitude; consciousness of discomfort; anxiety, fear, and sleepless nights: and by a continual round of these evils, health, and even life, is frequently destroyed. These are the uniform results of the infringement of the organic laws; and, as man is an organized being, subject to those laws, and the Creator has bestowed on him reason capable of understanding them, it is his bounden duty to study

them, and, so far as he can, to turn them to advantage.

These tend to disturb that equability of action so essential to the preservation of health.

From the disturbance of this equability of action by these means, arise disease, and with it death, which often takes place long before the period assigned by nature. On the contrary, the preservation of this equability of action, by such a manner of living as will daily restore to the blood the exact amount of its waste, will secure health, and health's natural consequence, length of life.

The causes which are fatal to the attainment of perpetual health and length of life, are, by many blind leaders of the blind, declared to be beyond the control of man! (No man's passions are beyond his control: were they, where would be his accountability? and where the reasonableness of any laws, human or divine?)

I would ask, is it not within his power to observe and judge of the quantity and quality of his diet? To consume no more at his meals than nature demands? To avoid inhaling a confined, impure, or otherwise unwholesome air?

To take daily active exercise? To rise early in the morning, and to retire to rest early at night? To insure the proper discharge of sensible and insensible perspiration, by exercise and daily ablutions of the body? To refrain from taking deleterious medicine? and to pay strict regard to the alvine exonerations? If these things are within his control (as most assuredly they are,) then the position, that continued health is not maintainable, falls at once to the ground; for, in the whole catalogue of diseases, there is scarcely one, (if we except epidemics, contagion, and hereditary constitutional tendencies,) that is not occasioned by the non-observance of these cardinal rules. Now, to shut one's eyes against the light of evidences so irresistible, and that in a matter of such vital concern, is, I consider, little short of criminal; and certainly he who does not believe that health and length of life are within our reach, when following the strict though simple, line of living prescribed by nature, must plead guilty to the charge of being deficient in knowledge attainable by most persons; while he who fosters so unhappy a species of infidelity in others, must not complain if he be regarded as either manifesting gross ignorance or knowingly practising deception.

The whole art of preserving the body in its natural state, therefore, consists in supplying

that which is deficient, and carrying off that which is redundant: still, notwithstanding the reproductive powers of life, and the provisions made by nature for correcting every derangement incident to the human frame, every one knows that it contains within itself the elements of its own dissolution. A period must ultimately arrive in each man's history, when the powers of life will be finally exausted, and their regeneration be no longer possible. Let me, then, most earnestly beg of my readers to pause, and put this plain and serious question straitly to themselves:—WHY SHOULD THAT PERIOD BE ACCELERATED BY OUR OWN INJUDICIOUS CONDUCT, OR BY DISEASE AND PAIN BEING SUBSTITUTED FOR HEALTH AND PLEASURE!

The science of Physiology teaches us that the human body is a machine constructed upon physical, chemical, and vital principles, intimately combined, and wonderfully made. By nothing is that marvellous machine, the human body, so liable to be impeded in its movements and finally brought to a stand, as by the relaxation through indolence, or the overstraining through violence, of its springs.

All our physical ailments may be traced to some one or more of the following causes:—

1stly.—*Inactivity, including passive exercise, such as riding in a carriage, &c., no mode of exercise, having any title to the name which does not promote universal muscular exertion.*

2ndly.—*Lying long in bed, living in hot rooms, and that unnatural habit, of turning day into night.*

3rdly.—*The habitual respiration of exhausted and impure air.*

4thly.—*Infrequent ablution of the entire body.*

5thly.—*Inconstant or irregular perspiration, whether sensible or insensible.*

6thly-—*The consumption of food rendered pernicious in quality by the adulterations of cookery (a soft word for poisoning), including high seasoning; or exceeding in quantity the waste which it is required to repair.*

7thly.—*Large and frequent potations of wine and spirits; and, by consequence, inebriety.*

8thly.—*The immoderate indulgence of any of the passions; and the least indulgence of bad passions, such as anger, revenge, &c.*—and

9thly.—*The habit of swallowing drugs called medicine, whether spontaneously or by professional prescription.*

These parents of disease, decay and death will be now examined.

EXERCISE.

Firstly, by the law of nature, the animal machine, in order to be preserved in health, must be employed and kept in a state of activity. That sprightly vigour and alacrity which we feel and enjoy in an active course of life, that zest in appetite and refreshment after eating, which sated luxury seeks in vain from art,—is caused wholly by new blood being made daily from wholesome food, distributed by the joint action of all the functions and parts of the body to every portion of it.

To accomplish and maintain this desirable end, the several organs must be put in motion, to excite the body to action and reaction, to call forth the energies of every limb and muscle, to preserve the flexibility of the joints, and the tone and elasticity of the solids. To keep in action the processes of respiration, digestion, absorption, and nutrition; to expand the lungs, and keep the pores of the skin open; to promote the secretion of the bile, and exhilarate the animal spirits: and to propel the blood through

the system, and thus to throw off those impurities which would otherwise clog and retard the vital functions,—to maintain all these numerous objects, active exercise in the open air is the most effectual method.

Various are the modes by which man may choose to exercise his body; but certain it is, that the penalty for the neglect of it, in some form or other, if that neglect be habitual, will be not merely bodily and mental lassitude, but injured health that may lead to fatal consequences. Passive, as a substitute for active exercise, wholly fails of its design. The most effective and salutary exercise, proved to be so by every one conversant with the rules of health, is *walking*.

Next to walking, I deem riding on horseback most beneficial and salubrious; and, being somewhat less fatiguing, it is well adapted to those in an ordinary state of health, or whose constitution is naturally weak, as it agitates the viscera; but I am bound, at the same time, to observe, that those who take all their exercise on horseback lose a material portion of the advantage of exercising the lower limbs, which hang motionless.

It is true, civilization has exempted the higher

orders from the necessity of bodily labour, which they indiscreetly despise; and, from inattention to the exercise of their nervous muscular systems, which is so essential to the due performance of every function, they voluntarily suffer the penalty imposed upon neglect; while the lower orders of society, too frequently oppressed with toil, suffer the penalty of over-exertion. To avoid either of these extremes, and their respective consequences, is, however, in our own power. Let the diet be ever so light—let temperance be ever so rigidly adhered to—let the air be ever so pure—let the temperature be ever so adapted to man's nature,—all these combined cannot supply the lack of exercise.

To live two days with the same blood, deprives us of the enjoyment, not only of real healthy sensations, but causes too great a plethora or fulness; for, in a state of indolence or inactivity, the old humours pass off too tardily, and the insensible perspiration is too inconsiderable.

By full diet, insufficient exercise, too little ventilation of our lungs and skin in the open air, too much luxurious ease in drawing-rooms and bed rooms, a great tendency to accumulation of blood in the head becomes habitual.

EARLY RISING.

"For is there ought in sleep can charm the wise,
To lie in dead oblivion, losing half
The fleeting moments of too short a life?"

Secondly.—Man, whose life is but a span, has none of it to lose; and the lying longer in bed than the necessities of life require, is a habit which can be designated by no milder term than that of gross sensual indulgence, unworthy of a being possessing intellect.

The slave to sleep is as much a sot as he who habitually indulges in opium, or in intoxicating liquors; and the nearest comparison which we have for the degraded pair, are the idiot and the madman.

Impaired digestion, relaxed nerves, congested lungs, and disordered bile, will become the inseparable companions of those who lie long in the morning, and sit up late at night.

Were it seriously proposed to a young man, who had acquired the degrading habit of misspending his morning hours in bed, that he should shorten his existence by giving up ten of his healthiest and happiest years, from the short time allotted as the period of his life, he would doubtless shudder at the thought, nay, start with

horror, and look upon the proposition as trifling with his feelings, and insulting to his understanding. Let me, then, ask this habitual morning sleeper, where lies the difference between taking ten years off the time allotted in this world at *once*, and taking it off by two hours every morning,—hours which are, to all intents and purposes, expunged from the period of his existence.

And yet three-fourths of the inhabitants of this country lie fast asleep for several hours in broad day-light.* While it is continually in men's mouths that "life is short," does it never occur to them that they themselves make it much shorter? By giving to sleep two hours more than nature requires, we actually cut off the seventh part of our existence. Were we to redeem this portion of time, we should lengthen our lives in two ways:—first, by the mere addition of time redeemed; and secondly, by the extension of our whole period of existence consequent upon the increased health and strength to which we should attain.

"Who would in such a gloomy state remain
Longer than nature craves?"

AIR.

Thirdly.—There is no subject within the whole range of medical literature, apparently so little understood, as the insidious influence of impure air, in the production and aggravation of disease. The knowledge of this fact ought not to be considered as exclusively important to the medical man, but as a truth in which every individual member of the community is deeply concerned, and should therefore feel a direct interest.

It may be received as an axiom, that, so long as respiration is properly maintained by pure air, nutritious aliment, and a cheerful state of mind, while the temperature of the body is kept at the natural standard by avoiding damp air, wet feet, chilling winds, cold rooms, over-exertion, and intemperance, there could be no serious aberration from the healthy state. But many have yet to learn, that all their vital functions are more or less modified by every change of temperature, and the latter by everything which operates upon them, whether for good or for evil.

There is nothing in nature but is undergoing a decomposition, nothing which is not giving off something to the atmosphere, or taking in some of its contents. Air, by stagnation, may corrupt itself, and become a subtle poison.

I have no hesitation in affirming, that nearly one-third of the children born in London in confined situations, die before they are two years of age, solely for want of a good air.

An adult man, in the course of every minute, respires a cubic foot, or nearly a pint of air, at each inspiration; and it has been demonstrated by experiment, that the same air cannot safely re-enter the lungs more than four times; the respiration of animated beings depriving air of that property which is essential to life; namely, the oxygen, which constitutes nearly one-fifth of the whole volume of the air; and leaving nothing for respiration but the azote, or nitrogen. How necessary, therefore, is it for every one who values his health, to renew frequently the air he breathes!

Too much aliment may easily be taken, but too much air never. One would suppose, the knowledge that we pass one-third part of our existence in our bed-rooms, would alone be sufficient to induce us to adopt measures for expelling, instead of preserving the noxious influence of the air exhaled from our bodies.

Man is constituted capable of encountering every vicissitude of weather and variation of climate, so long as he observes certain rules

which are calculated to sustain the stomach in the full possession of its powers. To inure ourselves betimes to its sudden changes we must cease to live in rooms heated by large fires, and defended from the breath of external air; we must renounce our close carriages for the horse's back, or, better still, our own feet; we must not surround our beds with curtains, and we must give up adapting our dress to every trifling alteration in the weather.

If we were to view the human body with a proper glass, Dr. Cheyne observes, "it would appear with an atmosphere quite round it like the steam of a boiling pot. The frequent interruptions of this essential excretion arise from want of active exercise in the open air, eating too much, and bathing too seldom; to which may be added, sudden transitions from heat to cold. But the most immediate obstruction to perspiration is sudden exposure to cold air. It acts upon the skin by hastily closing its pores, which refuse to re-open, although afterwards subjected to a warmer atmosphere.

The constant changes of our inconstant clime furnish a strong argument for watchfulness in this particular. We cannot control nature in this respect, therefore we must accommodate ourselves to its peculiarities.

BATHING.

Fourthly.—Frequent ablution of the body, is the great assistant of nature in warding off disease. When the pores of the skin are half closed* and unfit for use, the consequence is peculiar susceptibility to infectious disorders. Bathing is a remedy in many diseases; but its utility as a remedy is as nothing compared with its powerful preventive agency; yet few have recourse to it, unless it be prescribed by the physician, for the restoration of impaired health.

THE SKIN.

Fifthly.—Perspiration, whether sensible or insensible, is one of those discharges which, in due proportion, must he constantly maintained; otherwise, the health suffers. Checked perspiration is a cause of serious disease. In the ordinary state of the body, the skin is constantly giving out a large quantity of waste material, by what is called insensible perspiration, a process which is of great importance to the preservation of health. This exhalation, being in the form of vapour, and carried off by the surrounding air, is invisible to the eye. It is considered, however, to amount to the almost incredible quantity of three or four pounds in every twenty-four hours.

* "Even from the body's purity, the mind
Receives a secret sympathetic aid."—THOMPSON.

FOOD.

Sixthly.—I would wish deeply to impress upon the minds of my readers, that the food, from its first introduction into the mouth, and throughout all the intermediate changes wrought upon it by the agency of the several fluids with which it comes in contact in its progress towards becoming blood, mainly depends, for the accomplishment of this purpose, upon its own healthy quality, and on due regularity in all the secretions, which should be kept and maintained healthy, entirely by the vigour and activity of the heart and arteries, which are wholly dependent upon strict adherence to nature's laws. Those, however, who object to "living by rule," by which the supply of the wants of nature may be governed, take great pains to set forth that it is next to impossible that we can be so invariably on our guard as to make up the daily waste of the body out of the blood, in the exact proportion in which it requires to be made up. Now, as eating and drinking alone supply this waste, and as there is no fixed quantity of daily waste, it being always in proportion to the quantity of food and quantity of bodily exertion occasioning the waste, I cannot see what is to prevent our keeping in view the essential point; namely, to practice, when in health, what is necessary to preserve that health. I do not presume to convey the idea, that man can, throughout his

life, conduct his course of living with such unfailing exactitude as to repair the waste of his body precisely in such a degree as that it shall never come short of, or exeeed the due quantity; but experience has convinced me, that so long as we attend to the sensation which nature has implanted within, to warn us that we have eaten and drunk enough, and to act as a check upon our desires and appetites, and so long as we make ourselves subservient to, and are governed by its mere natural impulse, it will enable us to adopt so even a course as to establish an equilibrium in this particular. Thus we should become habituated to taking only such quantity of food daily, as would be necessary to restore to the blood what it had lost in the waste of the body. We have, therefore, ourselves alone to blame for the bad health caused by habitual inattention to the monitor which Providence has so wisely placed within us, obedience to which would have most certainly prevented the painful consequences.

The true source of gratification in eating lies not in the food being rendered savoury by the luxurious arts of cookery, but in the nice sensibilility of the nerves of taste, which, whetted by a proper degree of bodily labour in the open air, communicate its flavour to the mind. When the appetite proceeds exclusively

from natural causes, the stomach is in a fit state to receive any thing which air, earth, or ocean produces: nothing will be hurtful so long as due regard is had to quantity and cookery; and in this state we can partake of the most simple dish with alacrity, discarding the aid of foreign excitement. The gourmand knows nothing of those exquisite delights which the active and temperate man realises at his meals. When, through indolence and intemperance, the appetite requires to be excited by tonics, stomachics, and the like, the artificial desires for food exists no longer than these incentives continue to act, and then leaves the stomach to digest the discordant mass with which it has enticed it to encumber itself. The food, too, is prepared with a view to meet this unnatural appetite; and thus the mischief of deleterious substances is added to that of excess. It would really seem that the great end of cookery is to prepare food in such a manner as to destroy the very sensation which tells us we have eaten enough,—a sensation which nature has implanted within us as a check upon our appetites and feelings.

Does it require a moments consideration to be satisfied, that, when the stomach, one of the most important organs, is kept in a state of almost perpetual excitement and unnatural activity from the present mode of living, it is

impossible that the other wheels of the machine can go right, when the first wheel on which all the others depend goes wrong? The intimate connexion between digestion and the process called sanguification, (which means the conversion of food into blood,) and the knowledge of the mode by which it is effected, should be the objects of our particular investigation. Those who desire to have their health in their own keeping, who are wise enough to cease eating and drinking before satiety is produced, are the persons who act in accordance with the principles on which health depends. The principal and most powerful causes of indigestion, are the present fashionable modes of intemperance. If the powers of digestion be overtasked, a sense of oppression, instead of refreshment, will take place, and some portion of the surplus food will probably remain unassimilated; in which case, derangement is sure to ensue. Whatever substance, therefore, affords nutrition, or whatever is capable of being acted upon by the organs of digestion is called aliment. Such as resist them possess the power of disturbing the digestive tube, which revolts from whatever it cannot overcome. Food, to be wholesome, and adequate to maintain the vigour of the stomach and of the system, should possess digestibility, nutritiveness, and a certain power of exciting and stimulating the stomach. Meals should be taken at stated periods.

More depends on this dietetic regimen than is generally imagined by those who are unacquainted with the laws of the animal economy. The number of meals, as well as the quantity and quality of the food, should be regulated by the strength or debility of the stomach. The too general practice leaves the greater part of the day without a meal, and then two or three are taken nearly together. This is manifestly bad, as, in the first case, the body is left in a state of exhaustion; and, in the second inordinate repletion is produced. This enfeebles the powers of life.

DRINKS.

Seventhly.—With a view of lifting the veil that conceals the degrading bondage of living under the impression that alcoholic liquors may, without harm, form part of the ordinary sustenance of man, I may, under this head, point out the vast amount of irresolution, which has prevented the torrent of this almost universal intemperance from being stemmed, and set forth such examples as may be likely to work a reformation in such continued transgression of the laws of living, as will, if followed, protect the vital power from becoming extinct sooner than nature intended.

To talk of men in full health wanting *stimuli*, is a libel upon our common intellect. Have

they not stimulus in the food they eat, in the atmosphere they breathe, in the continued round of duties which engage their bodily powers, or mental energies, enough to preserve them in health and strength, without having recourse to any adventitious assistance? If not, alteration in diet or regimen, or the use of remedies which tend to promote the regular play of the functions according to nature, should be had recourse to, rather than alcoholic stimulants, which only tend to destroy the balance of the whole system. Wine, brandy, gin, rum, whiskey, &c., when pure, are nothing but alcohol and water, and the fiery spirit in each of them is obtained by heat and fermentation, from various saccharine substances, *in none of which* is there the least particle of nourishment; nay, worse, every one of them is a poison, proved to be such by scientific men.

There can be but one opinion then of such beverages. They are manifestly fatal, not only to the stomach and digestive organs, but also to the nervous and general system. What, I would ask, should give man the privilege of continued transgressions of the laws of nature with impunity, when such trangression leads to disease and death? Is it because the abyss on whose brink the multitude stagger in a half sleep of indecision and prejudice has never been pictured to them in all its terrors?

Could we but adequately paint what is before our own eyes, and could we show to the healthful youth some form of feeble age, the wrinkled front, the dim eye, the withered cheek, the wasted limbs that cannot bear, without additional support, even that thin frame which bends over them to the earth, so soon to receive all that is not yet wholly dead and consumed in the half-living skeleton,—could we say to him, as he gazes almost with terror on this mixed semblance of death and life, the form on which you are now looking will shortly be *your own*, if you do not summon immovable resolution to resist at once the temptation to the use of alcoholic drinks,—how incredulous would the heart of this young man be to the prophetic intimation! It might seem scarcely possible to him, as yet free from this consequence of intemperance; for, although he observes around him sickness, suffering, and premature death, he is still ignorant of their arising from abuses in the modes of living, and from the apparent inability of men to withstand the allurements of this fatal vice. Thus might he be led to reason with himself—"Are the pleasures of the table, then, such as that human beings, endowed with intellect, are incapable of refraining from, practices directly opposed to the very ends they seem to desire, practices that will ultimately destroy them?" It would appear, to this ingenuous young man,

scarcely possible that any number of years should convert what he felt and saw in his own vigorous frame into that scarcely breathing thing of feebleness and misery, the counterpart of which, when a few short years should have passed over him, he was himself truly to become.

It is from the beginnings* of the baneful desire of drinking that we are to be saved, if we are saved at all; for at the commencement of taking into our bodies deleterious drinks, we are sensible of certain twinges of remorse, which almost invariably embitter our existence at the time, and produce flickering resolutions not to continue but to discard the incipient vice. These, however, are not strong enough to reform, they are only keen enough to disturb.

The highest duty we owe to ourselves is to strengthen, as much as it lies in our power to do, every disposition which constitutes or forms a part of our own preservation; and we err against this high duty, and prepare ourselves for weakening our resolutions, so often as we yield to a single allurement, or are betrayed into the slightest deviation. In yielding once, we lose our hold; and the lapse is almost like a licence to yield again. The second error seems

* "And in the tempting bowl
Of poisoned nectar sweet oblivion swill."

to save us from the pain of thinking that the temptation which we before supposed to vanquish our feeble virtue, was one which even that feeble virtue was capable of overcoming; and our present weakness is to us, as it were, a sort of indistinct and secret justification of the fact.

This human degradation—this relinquishment of the intellect with which we are endowed, applies to that truly alarming feature of the age, namely, the utter apathy and indifference generally manifested as to the destruction done throughout the land by the use of alcoholic liquors.

In what way, then, is it possible to move men so as to work a thorough conviction on their minds, that by their indulgencies in alcoholic liquors they are literally becoming their own destroyers? Every conceivable attempt has been already made, every possible argument and device have been brought into action, medical as well as non-medical men have tried to induce a right state of feeling, but all to no avail. To every such representation it is replied, "that to call for the relinquishment of the daily potion of fermented liquor which has been enjoyed from time immemorial by ourselves and our forefathers is arbitrary." "Why," they retort, "were

such and such wines and other products of nature made so stimulating and tempting to the palate, and why do they make us so vigorous and happy? Are not these proofs that they are good?"

In all cases it is necessary to hear both sides of the question. In the one under consideration, it is indeed most material. Some writers in favour of the use of alcoholic liquors, defend them on the ground that they would not have been given to man *had they not been good!* This specious mode of reasoning, but too readily makes its way with many, who without inquiry, exult in the possession of an argument which they declare to be of an unanswerable character.

The evil in this, as in other matters, is, that people are prone to decide in favor of that which is most congenial to their own inclinations, without ever bestowing a glance upon the opposite side of the question. If, then, in the present instance, both sides were taken into account, it would be found, that, though these inebriating drinks are certainly manufactured from substances which are the productions of nature, yet they have themselves no claim to be considered natural productions,—the vinous fermentation by means of which they are derived, being not only not a healthy condition of

vegetable matter, but actually a condition of matter in its progress to decay, and consequently altogether detrimental to health and life.

Alcohol, which is the really intoxicating principle in all vinous and spirituous fluids, is entirely the product of artificial agencies, and does not exist ready formed in any body or product of animal or vegetable vitality. Nature abhors and disowns it. It is the result of fermetation, a horrible process of decomposition, which takes place in animal and vegetable substances when life has left them. Multitudes of dead things will yield it, and it cannot be produced from any parentage but rottenness and corruption.

Drink is required simply to repair the waste of the natural fluids, and water is universally held by competent judges to be the most proper for the purpose, men have sought out inventions, and required beverages that they can take pleasure in drinking, whether they are thirsty or not: so that, in truth, to quench the thirst has become one of the last things that men drink for; they drink whether they are dry or not, simply because they have discovered a way of making the art of drinking pleasing to the palate.

Can there be a doubt, that in at least nine out of every ten cases in which the medical man is

called in, the disorder is caused, if not by hard drinking, yet by that regular system of indulgence, which is self-deceivingly termed, "*the moderate use of wine and spirituous liquors.*

More mischief has been done by the hacknied phrase "*moderation*," as applied to the use of intoxicating liquors, than may be imagined. It is well known, that, in many instances, persons who profess such moderation drink more liquors than numbers of men who are branded with the name of "drunkard." If men drink liquors in moderate but daily quantities, pacing slowly along the road that leads thousands to destruction, but stopping short of positive intoxication, and thus retaining the ability to fill their vocations, they consider themselves, and are frequently designated as, "drinkers in moderation."

This plausible word *moderation* is used in reference alike to the cautiously temperate man, and to the strong-constitutioned bacchanalian. It is applied to the act of drinking now and then a glass of intoxicating liquor, as well as to the habit of gulping down daily a large quantity of strong drinks. *Moderation* is a much more flattering word than intemperance, and, by adopting it, the habitual, measured toper, fancies that he will avoid reproach. It is a word altogether perverted from its true sense; it

ought to have no connexion whatever with the ordinary use of intoxicating beverages. As well might a man profess to be moderate in his diet, though having his table daily spread with all the favourite dishes of the epicure, as profess to be a moderate drinker while daily using destructive and intoxicating liquors. *Moderation*, when applied to intoxicating beverages, no longer retains its proper signification, being made to mean anything, in truth, between true sobriety, on the one hand, and extreme drunkenness on the other. It is not used merely to denote the mean distance, but to describe the entire space between the two extremes. It is not true temperance, but affected sobriety and secret inebriation, and consequently is the highway to the worst forms of intemperance.

The purchase of this dear-bought pleasure, sociality, soon becomes conviviality; and conviviality speedily degenerates into settled debauchery, which brings on pain, disease, infirmity, and premature death. Though antiquity has handed down Bacchanalian melodies in praise of wine and strong drinks; and the delicious liquors of Anacreon have been celebrated in strains yet more delicious by raving versifiers of our own age and country; we must not look for reason or truth in the compositions of men who, if not inebriated when they write, write to

encourage the promotion of the pernicious habit in others. Let men, instead of consulting these hired retainers of the wine merchant and the distiller, inform themselves a little of the digestive processes, and they will soon discover that habits of wine bibbing and spirit drinking derange the machinery on whose smooth operation their lives depend; for alcohol, as all the world knows, or should know, does not nourish, but only stimulates,—exhilarates if you will, but exhilarates as fire exhilarates! Would carbon or any other combustible exilarate only to burn up, consume, and destroy?

Looking at all the circumstances it may be said that alcoholic liquors should never be used medicinally, except in cases of sudden emergency. Total abstinence, however, from wine, beer, and spirits, not merely as drinks for man, but also in relation to any medicinal pupose or occasion whatsoever, is, I think a complete perversion of all just notions of temperance, and betrays a very lamentable weakness of intellect. It will be seen, I think, that no one can be more opposed to the general use of these questionable, and, when consumed in excess, demoniacal agents, than I am; but, that man, *intellectual man*, should deliberately sign a pledge to wholly discard these products, even on occasions when, as is well known, and as we have abundant proof,

diluted spirits afford instant and effectual relief in attacks of sudden complaints, where perhaps medical aid is not at hand, as well as on many other occasions when the human body is in a weakened or depressed condition,—that men, with all these facts before them, should persist in a foolish proscription of such important agents, exceeds almost the power of belief. And yet, it is a fact, the truth of which cannot be questioned, that the late Mr. Cash, whose name was familiar to the public as having brought to light the transactions of Mr. Hudson, in connection with the Eastern Counties Railway Company, carried away by blind enthusiasm, fell a victim to the cholera, after having been warned by Dr. Hodgkin and Dr. Conquest, that, unless he deviated from his rule of entire abstinence and sustain his system by the moderate aid of alcoholic stimulants, he would inevitably lose his life!

"We curse not wine, the vile excess we blame."—ARMSTRONG.

It is an undoubted fact that many invalids have been restored to health, both by the temporary aid of wine, and by weak brandy and water. Those doctrines which denounce alcoholic liquors in any form as unsuitable and hurtful to man at all times and under all circumstances, are certainly not supported either by experience, or by chemical, physiological, or medical science.

The following are exemplifications of a few prevailing instances in domestic life, of the infringement of the organic laws, the fatal results of which are usually set down to the number of mysterious providences.

A father with every prospect of success, eminent in his profession, and reasonably calculating upon a long continuance of life, is cut off in the midst of his days. His friends lamentingly exclaim, "How truly awful! But, as it is the will of Divine Providence, we must submit." A truly sensible person would not arrive at this conclusion, when he learnt that this very man, with the fair prospect of worldly gain and usefulness before him, acted as though he thought he was created for no other purpose than that of getting money, or that he consumed his days in hard study, or else confined himself within the walls of business to the entire exclusion of active exercise and pure air; that he was a stranger to early rising, and that, after the fatigues of the day, or rather the racking of the brain, he ate luxurious dinners, and sat up half the night drinking various wines and gratifying his appetite without restraint: thus violating every one of the laws of nature on which health and long life depend. Would it not be worse than impious to set down such a man's death to the dispensation of God's providence?

A young female exposes herself to damp and cold midnight air; her person clad, or rather half clad, in the flimsy costume of fashionable life, facetiously termed full dress. In the depth of winter, thus equipped, she ventures to return home, and pays the sad penalty of her imprudence. The circulation of the blood is checked, a cold succeeds, fever ensues, and death terminates the scene. Who could have supposed it? What an unaccountable event! And so her friends, drying their tears, exclaim, "We must not fly in the face of Divine Providence." Allow me, my readers, to appeal to your own good sense, whether it was Divine Providence, or her own folly, that cut short this unhappy young lady's existence.

Examine another case of real life, the undoubted effects of sedentary habits. A reverend clergyman, in Edinburgh, who had valuable gifts, gave much promise, and then died of a stomach disease contracted when a student. He did not alternate bodily with mental labour, or he would have been still alive. When he entered upon his studies, he was making progress towards the maturity of manly vigour. He studied and neglected exercise, until his muscles dwindled, his digestion became disordered, his lungs congested, and his head incessantly distracted. Look at him at this point in his career. He has

gained much useful knowledge, and improved his talents; but he has ruined his health. The duties of his mind were done; but those of his body were left undone. Nearly 400 muscles, the organs of motion, had been robbed of their natural action, and now had become, like the rest of his frame, a prey to disease and to irritable nerves. Was his death to be attributed to the will of Divine Providence? And so with the thousand sources of mental anguish resulting from disappointed ambition, blighted hopes, ruined prospects, reverses of fortune, mercantile losses, domestic afflictions, and all the varied ills which the spirit as well as flesh is heir to.

If persons are afflicted with disease evidently brought on by the abuse of nature's laws; if a man rise at a late hour in the morning with a distracting head-ache caused by the previous night's debauch; if a victim to sensuality is carried off by apoplexy,—orthodoxy complacently sets it all down to the account of Divine Providence! What is this, but saying to the votary of sensual gratification: Go on; there is no help for it; "it is the will of Divine Providence."

Are these the results of the primitive organization of man? are they not the consequence either of an artificial mode of life or of corrupted habits? If they spring from the constitution of

our nature, then the only alternative is to submit to them; but, if they are the direct offspring of error, it is our bounden duty to use every effort to diminish them. And why do we not? Simply because we live in wilful ignorance of the animal economy and of nature's laws.

Where, then, is the man in his proper senses, who will not at once acknowledge, that the violations of nature's laws proceed directly from our own spontaneous act, our own absolute desire to commit them? Had the unhappy victims been aware of the intimate dependence of the mind on the condition of the bodily organization, they would have clearly perceived what they would have to endure in consequence of such inconsiderate steps; and yet generation after generation openly delude themselves by quietly imputing these slow suicides to the *will of Divine Providence.*

We may couple "mysterious Providences" with "comforts of life." Some persons will say, "We have, consistently with a due participation in the "comforts of life," conformed to the rules of nature, and therefore indulge the prospect of long life." The question which naturally arises then is, in what do these "comforts of life" consist? The phrase is generally used to describe those luxuries which common usage has recognised in

that character, and the enjoyment of them constitutes what these persons cannot do without. The prevailing "comforts of life" are, in addition to artificial feeding, artificial hours of rest, and artificial exercise (of themselves sufficient to dilapidate the strongest constitution), exclusion of pure air by double doors, listings, sand bags, and chimney-boards in bed-chambers and sitting-rooms, sitting still for hours together in rooms of an over-temperature, engaged in novel-reading, card-playing, and other sedentary amusements, close application to study, blazing fires, soft beds, stuffed and cushioned couches and carriages, &c., &c.

Many who have indulged in such "comforts of life" as these, must confess their disappointment, and own themselves to be at a still greater distance from the point of sound health, and that solely from the evil consequences which, to every one not predetermined to resist the evidence of his senses, may be proved to have resulted from indulgence in these "comforts of life." With what satisfaction then, I ask, can those who have failed in so important a design elude the memory of their ill success? The re-establishment of health is never to be accomplished by half measures, nor is it compatible with the continuation of even small indulgences. I need hardly repeat, after what has gone before, that

the opposite to all such " comforts of life" as these, is the only sure method by which sound health and length of life are to be secured. Can men experience a real disappointment in not finding health, when they have sought it in paths which do not lead to it, but lead in a contrary direction.

The possibility of longevity is attached to the principle of human life. Everyone may be regarded as susceptible of its benefit. Long life, in fact, is one of the grand prizes of human existence sure to fall into the possession of some one: Reason, therefore, suggests to all, to enquire whether any skill or care, or aught else, can increase to individuals the chance of acquiring it, and of making it, if it should be granted, as comfortable as any other portion of our usually brief existence. As longevity, therefore, has been made to some extent an appurtenance of human nature, the probability will always be, that, by a due use of the means which it is within our power to apply, the blessing may be acquired and enjoyed by a far greater number than have hitherto experienced it. It is estimated that if all the population were living in healthy condition, and life were only terminated by natural decay, the ordinary age at which men and women would depart would be 80.

Longevity, I repeat, is one of the natural

qualities of the human body, and is possible to all, though as yet in modern times, granted but to very few. It only requires a firm and watchful regulation of the laws that produce our life and growth, and of their results ; for, without this constant government and adaptation of them, so as not to confuse and disorder their operation, and disturb those sequences of things on the preservation of which all true foresight and prudence must be founded, or we cannot expect to reap the fruits of our most assiduous exertions.

The length of life in all classes is increasing, and the extreme period of longevity may be expected to take its measure from the general prolongation. I do not mean to say that the longevity of mankind is greatly extending in point of absolute duration, but that it is multiplying in its individual frequency. This multiplication would become a thousand-fold were individuals, by a wise use of serviceable means strive to make themselves possessors of the boon ; they all may thus open to themselves a prospect of partaking of the advantage, if they sufficiently value it.

It will be but a reasonable enquiry to ask, whether any information has ever been given of the diet of long livers, so as to enable others to profit by their example. In the first place, then,

all ages have found that bodily indulgence tends to inevitably shorten human life. This dictates to us that self-regulation should keep us on our guard against the daily opportunities of over-indulgence. Daily habits of full feeding, for example, are not favorable to durable life; on the other hand, careful diet in wisely regulated quantity and quality, though certainly one of the talismans of long life, is not the only one. The worst of it is, that customs of society have been adopted, and are in full practice, without any reference to this object, and consequently, in many points incompatible with it. And yet, in spite of all that has been said of "the pleasures of the table," these very gratifications which most favour continued vitality will be found, in their course, to be far more pleasurable than such as invade and abridge it.

Whatever injures the functions of life, hurts the spirits and the temper, brings on lassitude or pain, and fixes corroding diseases, as well as occasions the more rapidly destructive ones, or promotes their fatal tendency. Hence we become our own enemies, and are every day stirring up evil agencies into action upon us, to accelerate that very mortality which we complain of as so imminent; yet will exert no due skill, or care, or self-coercion to avert it.

Long life, firm health, and a death without pain, can, I repeat, only be insured by an unvarying career of temperate living. "But how," it will by many be demanded, "can we be expected to sacrifice all friendly and convivial intercourse?" I answer, that the sacrifice of those enjoyments is not required, so long as they are rationally practised and temperance presides. Some again, proudly imagine, that, so long as there is a single point of excess beyond that which they have reached, they may safely calculate on most of the immunities of health. This is a gross delusion. A course of sensual indulgences, however trivial, individually, will, if systematically persevered in, prove destructive of health; surely though gradually and radically though imperceptibly, the constitution will be undermined, and the stealthy ruin will by and by be indicated by the incapacity to bear the incidental attacks of disease. Besides, there are seldom any who do not intend, at some time or other, to reform their habits, to burst the shackles of customary indulgences that will destroy them; but, unfortunately, one impediment succeeds another; and in general, total ignorance of the functions of the human body, the knowledge of which would at once move them to reflection, weakens their resolutions, and death eventually intercepts the too long delayed project of amendment. Thus, then,

it is a very fine thing to start with the resolution, that, at some given point in the "road to ruin," we will turn the heads of our pampered appetites; but what security have we, that, after so long indulgence, they will then obey the rein of reason?

To withstand temptations to sensuality, and steadily to refuse opportunities of exciting and inflaming the passions, is a noble exercise of virtue. Why should it be so rare? One might almost imagine that it involved exposure to some dire punishment, instead of insuring health and long life, the two greatest of earthly blessings. Intemperance first generates, and then nourishes disease: abstinence destroys it. In general, therefore, how muchsoever we may be disordered, we have no right to complain. Continued intemperance, we know, is the sure forerunner of infirmity and decay; from which, when once we have become their prey, seldom any power on earth can effectually restore us. How unreasonable, therefore, is it to repine because such penalties are attached to our conduct, when that conduct is not forced upon us, but is voluntarily adopted by us? To him who thus involves himself in misery, with his eyes open, I would say, "Be content, bear your torments in silence."

The thorough-paced sensualist will long after

delicacies, even when he has neither teeth to masticate nor palate to distinguish; and will thirst for the cup which he cannot lift. Though no longer capable of sinning in act, he still sins in desire.

If by our own free living we abridge the term of our existence, how much do we fall short of the moral guilt of suicide? To effect the extinction of life gradually, is surely, in principle, as criminal as to terminate it by a *coupe de main.*

It is true, that instances are on record of persons arriving at a great age who had been guilty of excesses; but these can be viewed in no other light than as a few exceptions to a general rule, appearing to be frequent only because they are frequently obtruded on our notice by those who take shelter under them. Were the premature deaths occasioned by intemperance made public, the long-lived drunkards and debauchees would appear to them as a drop to the ocean.

CHAPTER III.

PERVERSION OF THE EARTH'S PRODUCE.

Though our bodies be subject to decay, disease, and death, we can scarcely consider the physical structure of man as a machine, which, after performing certain revolutions, must necessarily stop. On the contrary, the great difficulty appears to be to determine why *that* which is so exquisite in all its parts, which furnishes such an admirable display of the wisdom of the Creator, and is in every respect so well adapted for vigour, enjoyment, and length of life, should be so easily deranged and so soon destroyed. A little reflection will, however, convince us that no ingenuity of argument is necessary to conduct us to a sound conclusion. Individuals have only to ask themselves one simple question, namely: How does it happen that the human body cannot now sustain its strength and evenness of life for ages as it formerly did, without being subject to derangement either by rude shocks, or by the

gradual undermining of the constitution and an enervating of its compactness, inducing its unintentional destruction, and consequently lessening the duration of life compared with the earlier periods of the world? and the answer will readily suggest itself, namely, "Mankind, rather than relinquish the sensual and indolent indulgencies and habits, adopted in virtue of their own constitutional adaptibility, by all grades of life, universally put up with, and in reality prefer a short life to one of patriarchal extent attainable only by abstaining from their own code of living."

People are apt to suppose that the original substances and modes of living which caused life to be extended even after the flood *now* exist, and are at this moment at their command were they disposed to avail themselves of them! *Here is the grand mistake!* With the exception of one beverage, (alcoholic drinks,) they have all long disappeared from the earth.

Human will and human power have changed the whole face of the world—men have allotted to voluptuousness almost all the attributes of temperance—food aided by foreign excitements to suit an artificial appetite they have called nature's fare—the air they breathe they vitiate—the exercise they take is artificial—racking the

brain they have called labour—leaving their beds long after the sun has risen, they have called early rising—they have called their passions their natures, and then inferred that by gratifying them, they were following her dictates—in truth, they have voluntarily quitted a life of purity which insured patriarchal length of years, and have substituted one of sensuality and indolence, which seldom fail to shorten their existence.

The health preserving powers of the body, it is true, were capable of protecting it from disease, and of prolonging the duration of life so long as nature was not interfered with. But, from the perversion of the earth-born produce, and the continually advancing modes of sensual living, those powers, as well as man's whole nature, are so completely changed and depraved, that myriads of human beings are destroyed at early ages, from diseases never before known. So long as any taint or infirmity arising from luxurious living is allowed to remain in the human system, the first seeds of disease will be found implanted in the embryo-being even before it has breathed the breath of life; and thus corruption is derived from father to son, and abbreviation of existence follows in established succession.

The infant is too frequently made the innocent victim of the evils of intemperance, suffers for the sins of its forefathers, and inherits the diseases and the tendency to disease, which they had incurred.

Carbonic acid gas, water and ammonia, partly derived from the air, and partly from the soil, chemists say, are the food of plants and of grain; and for the purpose of obtaining it for such food, among other artificial and deleterious substances used, are the refuse from the tallow melters, fish refuse, slaughter-house offal, the contents of sewers, the decomposed carcasses of animals, the excrement of sea fowls, gas water, chemically prepared night-soil, and other most noxious and poisonous substances. Whether such dangerous matter ought to be used in stirring the earth's soil into a state of morbid excitement, (if I may be allowed the phrase,) and in subjecting it to the depraved processes of modern agriculture, so as to force it to be productive against its nature thus liable to cause diseases in crops of grain, vegetables, plants, &c. I will leave my readers to consider, my purpose being only to draw attention to these matters.

The sewage of London with its poisons and pestiferous infections which Parliament had

wisely settled to have taken afar off into the sea, has by some interested persons been made a topic for discussion, as to whether such plan would be judicious, seeing that this mass of abominable filth of the sewage of all London might be made the source of great profit to the agricultural interests, by turning its course from the sea to our country's land, into which it might be mixed with a view of yielding a larger amount of food for mankind.

There may be something in the science of agricultural chemistry; but there is all the difference in the world between chemical substances of ascertained proprieties and horrid masses of excrement and corruption! The exhausted soil may require a certain ingredient to impart new energy to its productive powers, and that ingredient may eventually result from certain kinds of manure; but the stercoraceous heap may contain a deadly poison, as well as a fertilising salt.

Mr. John Shier, Lecturer on Agriculture, in support of their use, says in his "*Elements of Agricultural Chemistry*:" "The death and decay of animal substances tend to resolve organized forms into chemical constituents; and the pernicious effluvia disengaged in the process seem to point out the propriety of burying them in the

soil, where they are fitted to become the food of vegetables. The fermentation and putrefaction of organized substances in the free atmosphere are noxious processes; beneath the surfaces of the ground they are salutary operations. In this case, the food of plants is prepared where it can be used; and that which would offend the senses and injure the health, if exposed, is converted by gradual processes into forms of beauty and of usefulness; the fœtid gas is rendered a constituent of the aroma of the flower, and, what might be poison, becomes nourishment to animals and man."

Might not the Lecturer just as truly have said, "These identical pestiferous poisons and decomposed substances are not allowed to remain above ground, and become deadly effluvia, to vitiate the atmosphere we breathe, and endanger our lives; but they are deposited, not *deep* in the bowels of the earth, where they might decay and put an end to all danger! no; they are deliberately mixed up with seeds and plants, when put into the ground to be raised for human food!"

Scientific agriculturists assert that the chemical preparations of these poisonous substances purifies them from *all* dangerous tendencies; but can they say that the pores, cavities, or

interstices of the divided parts of the earth are free from the fœtid steams of ordure? for all sorts of dung and compost contain some matter which, when mixed with the soil, ferments, and is a fitter food for venomous creatures than for edible plants; but there is ample room for misgivings as to whether it be not possible that food reared in the very midst of such nauseating filth which, when mixed with the soil, ferments, will not in some degree be liable to impregnation from the absorption of such substances; nay, the following quotation from the "*Rural Chemistry*" of Mr. Edward Solly, will, I think, fully bear me out in my opinion. "When plants," observes the learned Professor, "are growing vigorously, "and are abundantly supplied with manure, it "appears that they sometimes do absorb a small "quantity of organic matter together with the "inorganic products of putrefaction." Vegetables forced with strong* animal manure, are frequently found to have acquired a bad taste from the presence of minute quantities of some substance which they have absorbed undecomposed from the manure."

A foreign taste in the food of man is doubtless bad enough, when proceeding from an unforeseen

* "The water wherein a cabbage is boiled sends forth an offensive odour, but that the water wherein a cabbage from an undung field is boiled has no manner of unpleasant savour."

occasion, or from pure accident; but, to know that that taste proceeds from rank and impure manure, deliberately placed around its germ in its growth is revolting indeed. And I would seriously ask, are we at all times quite safe from the poisonous tendencies of deleterious* substances otherwise used in husbandry?

Whether fire, air, water, or earth constitutes the chief food of plants, the dullest farmer knows very well that if he clears, and drains, and manures his land in a proper natural manner, it will yield him as good a crop as the soil is constitutionally capable of producing; and that, having done this, he will have done everything that man is capable of doing to

* Arsenic in Crops.—Dr. Edmund Davy, Professor of Agriculture and Agricultural Cmemistry to the Royal Dublin Society, has made some startling statements, conveying the result of his experiments as to the presence of arsenic in crops. He states positively that arsenic as it exists in different artificial manures (such as the superphosphate) will be taken up by plants growing where those manures had been applied! He found this to be the case with cabbages; and turnips taken from fields in which superphosphate had been used gave the most unmistakeable evidence of having been arseniated. The facts thus collected appear to Dr. Davy to have some important bearings, for "though the quantity of arsenic which occurs in such manures is not large when compared with their other constituents, and the proportion of that substance which is thus added to the soil must be still small, still plants may during their growth, as in the case of the alkaline and earthy salts, take up a considerable quantity of this substance, though its proportion in the soil may be but very small. Further, as arsenic is well known to be an accumulating poison, by the continued use of vegetables, containing even a minute proportion of arsenic, that substance may collect in the system till its amount may exercise an injurious effect on the health of man and animals."

forward the natural productive powers of the earth.*

Salutary manure, no doubt, is the main prop of the farmer; and, by the judgement that guides its appropriation, will his success be regulated. But your "scientific" farmer looks for something more; so long as chemically prepared manures, putrescent substances, or aught else will cause the production of abundant crops, whether their qualities be fit or unfit for human use is a question he does not consider to be within his province, being bent only on finding a market for them. To increase the number of his arable acres, and extort from them the greatest possible amount of produce, with the least possible expense, regardless of the physiological requirements of man, is his great object; while the

* Jethro Tull, a gentleman of ancient family in Yorkshire, was perhaps the first writer, ancient or modern, who attempted with any degree of success to reduce agriculture to certain and uniform principles. He made the tour of Europe, and in every country through which he passed was a diligent observer of the soil, culture, and vegetable productions.

On his return to this country he founded his new husbandry, in spite of all opposition raised by the lower class of husbandmen against it. He demonstrated to all the world the good effects of his raising crops of wheat without dunging for thirteen years together in the same field, equal in quantity and superior in quality to those of his neighbours in the ordinary course. His doctrine was, that labour and arrangement would supply the place of dung and fallow, and would produce more pure corn at an equal or less expense. Every obstacle was thrown in the way of his new plan by agriculturalists, labourers, and others.

The neighbouring gentlemen, however, who where witnesses of the utility of his new theory, prevailed upon Mr. Tull to publish it, which he did, and it was considered to be a work of so much reputation that it was translated into French by M. Du Hamel.—*General Biographical Dictionary.*

people almost justify his cupidity by manifesting so little regard for their health and life, as seldom to institute any inquiry into the wholesomeness of their food.

In olden times, flocks and herds grazed at large upon the spontaneous produce of the uncultivated soil, and fed upon the grass in the open field, and upon hay, quenching their thirst with the pure water of the running brook. Their flesh was then, according to nature, pure and wholesome, and fit food for man. Refinement and luxury induce us now to despise this natural food. Our tastes require something stimulating and pungent. We now therefore stall our oxen, &c., and pamper them with oil cakes and unnatural food, till their condition is changed, and till their limbs are useless to them, and they cannot see out of their eyes for fat.* We give them refuse from the distilleries, and prepared drinks, to fatten them; and are thus supplied with flesh altered from its natural state to meet our vitiated palates, eating, moreover, double the quantity necessary, and then we wonder that the result should be disease.

* "Every animal which is fatted and killed for human food, is actually in a state of disease when butchered. It is extremely difficult, indeed, nearly impossible, to find in the butcher's markets of any of our cities, a perfectly healthy liver from a fatted animal; and it is by no means an uncommon thing for fatted hogs to die of disease when just about to be killed for the market."—Silvester Graham's *Science of Human Life*.

Comes then cookery, with all its arts, to torture our aliment from its natural or crude state, in order to render it still more agreeable to our unnatural cravings; the loosening its textures and fibres being erroneously deemed essential to assist digestion. Now, to those who know anything about the structure of the human frame, need not be told that all such contrivances, however refined they may be, and however supported by pretended researches, are abuses to our nature. Our digestive organs ought to require no assistance derived from art. The Almighty created and ordained our digestion to be strengthened by exercise, and in other ways conformable to nature, enabling it to perform its work without artificial aids, which do but add disease to indolence, and oppress both mind and body; so that life at last becomes a state of habitual indisposition, an endless train of headaches, hypochondriasis, disquietudes, and other numerous ills. The condiments and stimulants used by the *Soyers* of the day make men take more food than they naturally require, and thus over-burden the stomach, gorge the vessels, load the blood with excess, and disorder the nervous system; and yet, after having thus converted their food into poison, they are unreasonable enough to complain of languor, weakness, and debility.

Men cannot possibly die a *natural* death before the time nature has prescribed; a life spent according to physical and organic laws would prevent that corruption which feeds distempers. Those distempers cannot be produced without a cause; and if there was not a bad cause in operation, there could be no fatal effect, no violent death. Not that the perversion of the earth's produce, or any other perversion of nature, not more destructive than that which has already been practiced, will cause a further abridgement of human life, or do any harm in this respect beyond that which has already been done; for all these evils, as I have shewn, have now for thousands of years left the minimum strength of the human frame at a diminished ratio of from seventy to eighty years.

In addition to the evils of sensuality and indolence, men have unfortunately to encounter another hazard of their lives and health, namely: the deliberate and systematic adulteration of their food and drinks;* many of which are not only deprived of their nutritious properties, but are rendered absolutely noxious by the vile arts and merciless sophistications of the vendors. So general is the use of these corrupt materials

* "The man who steals one's purse commits a less crime than he who, by tricking our food, robs us of health."

that one need not wonder, though painful disorders were still more prevalent, and existence still more contracted, for the outcry is diminished by the universality of the injury.

Flour, flesh-meat, fruit, &c., are all subjected by the cook's ingenuity to the beginning of putrefaction, or to some mode of fermentation, before they are applied to nourishment; but it is more especially in the fabrication of drinks that man has displayed his utmost ingenuity. With the exception of water and milk, all is his work.

Beer is made palatable by the druggist's aid, new ale is made old by means of chemicals, wines, "neat as imported," are systematically adulterated, often containing spirits of wine, cider, alum, tartaric acid, decoction of logwood, and very frequently sugar of lead, brandy, British brandy, cherry, laurel water, spirits of nitre or aquæ fortis, various extracts of grains of paradise, and even oil of bitter almonds.

Although it is hard to detect these robberies, under the guise of fair traffic, without the aid of the operative chemist, yet it is notorious there is scarcely a commodity that enters into a family's consumption which is not more or less adulterated. If the evil rested there, it would be a loss only to the pocket; but, since

health and life are placed in jeopardy, it behoves us to be scrupulously watchful as to what we eat and drink In truth, from long habit, too many of them enrich themselves by plundering society, experimenting, weakening, strengthening, and flavouring, to tickle the palate, with ingredients of at least questionable influence upon the healthiest lives of the community. Extraordinary as it may appear, this is hardly thought a crime, because the system has become familiar, and because the eager and insatiable thirst for gain is proof against all prohibitions and penalties. Moreover, these public poisoners take especial care that the adulterations are of such quantities and so ingeniously mingled with the various substances as will not have immediately an appreciable effect. They operate imperceptibly so as not to excite suspicion, and provoke enquiry. Thus are the people in great towns and in the metropolis fed, although many flatter themselves that they are paying for pure articles of food and drink.

The faculty well know the alarming extent to which the illicit practice of poisonous adulteration has proceeded. It would be difficult, indeed, to mention a single article of food which is not to be met with in an adulterated state, and there are some substances that are scarcely ever to be procured genuine.

Doubly distressing is it then, that after an individual has suffered in his health through the adulteration of his ordinary food, he should be compelled to call in a physician, and then find that the very *medicine* prescribed for his relief is adulterated also, and of course subjects him to further danger of his life? Happily, however, these atrocious practices are at length brought under the consideration of the legislature, and no doubt measures will be taken for preserving the health and lives of the community from their dangerous consequences.

CHAPTER IV.

THE INFLUENCE OF OCCUPATION ON HEALTH AND LIFE.

There is a source of evil totally distinct from *intemperance*, yet not less pernicious, but affecting health and life in a fearful degree; and yet it is allowed by all persons, in their every day avocations and pursuits, as unconcernedly as if the habits thus contracted were of the most harmless nature. The reason given for being thus reconciled to them, is, that they say they cannot divest themselves of the deeply-rooted belief that the practices in question, though causing a prodigal waste of the mental and corporeal energies, are intimately connected with, if not absolutely necessary to, their daily duties, time and usage having caused them to be recognized as, in different modifications and degrees, quite inseparable from all human occupations whatsoever.

Decisive as such arguments may at first sight appear to be, yet, for their complete refutation,

it will, I think, be necessary only to lay open to view the sources from which these pernicious and destructive habits directly spring. They are such as these:

Labour continued beyond the physical endurance of man.

Over violent exercise.

Sedentary employments and inappropriate labour in any form.

Atmospheric influences.
Intense study.
Languor and inaction.
Sudden emotions.
Anxiety.
Debility.
Sudden passion.
Anger.
Indolence.
Sensuality, and
Voluptuousness.

Now, with the exception of the last three, men may themselves remove, or at least counteract these causes of premature decay, without, in the slightest degree, interfering with those unwise gratifications in food and drink which, as I have

observed, it would be idle to expect them ever wholly to relinquish.

The important matter under consideration, therefore resolves itself into this simple question, although mankind have given up a part of the duration of original existence in exchange for the evanescent and dangerous pleasures of the table, the temptation to which it is evident they *cannot* resist, Why should their lives be subjected to further curtailment by practices which they *can* resist?

What these injurious and avoidable practices issuing out of our daily occupations and affecting the duration of our lives are, and how they act upon the human frame, from the highest to the humblest grades of life, I will now endeavour to explain.

The method by which I propose to effect my object is, to classify the whole population of the country. This will enable me to show to all ranks their own peculiar case.

Man is so constructed that every function of life, every exercise of a muscle, a nerve, or any other organ, all the operations, in short, of our complicated mental and physical nature, expend vitality; so that, if the stream of life be either accelerated beyond or retarded below its natural

course, by the contracting of improper habits, existence will inevitably be brought to a close so much the sooner than nature designed.

Now, the lamentable truth is that all of us, more or less, daily commit this great sin against ourselves.

It may be said, that we cannot dispense with the fixed methods of performing our daily avocations which have so long existed, from inability to substitute others that would be equally effective, and yet free from the attendant evil complained of. Many untutored or half-tutored minds have, in this respect, deceived both themselves and others.

Now, it must be quite clear that nature suffers from organs, joints, &c., being overworked or overstrained, as well as from organs, joints, &c., not being worked enough, or perhaps not at all. Though this overaction and this overquiet operate on the human body in opposite ways, yet both operate injuriously. The laws of stimulation and limitation of the vital powers should be regarded as circumstances may in each case require: more rest for one and more energy for another might greatly moderate, if not entirely rectify many of the questionable features in the common employments of mankind

which detrimentally affect the natural workings of the interior organs, and cause unnecessary expenditure of physical vigour.

The commonest laws of human judgment with respect to motion, &c., make it quite apparent that the following habits and practices, so generally observable in the pursuits of daily life, are inimical to health and are the fruitful cause of sufferings more especially connected with carrying on handicraft work, besides exposure to accident and danger.

Stretching and twisting of the body and stomach; entire standing or sitting labour; rest too long protracted; intensity and repetition of excitement; disproportionate action of the various parts of the body: rapid waste of muscular strength by inattention to method; unnecessary movements in a diversity of occupations; undue straining of the muscles, &c.; unhealthy constraint and unnecessary pain; some organs acting in full developement at the expense of others; undue relaxation of the muscles; curvature of the spine; constant compression of the abdomen; extremes and rapid changes of temperature; stooping or other unnatural posture; excessive heat in working apartments; glare or deficiency of light; inaction during scholastic occupations.

In point of theory it has been doubted whether, strickly speaking, every disease may not be ultimately referred to some external cause. This much, at any rate, is certain,—that many pursuits are so much too sedentary or too laborious that the powers of nature are either suffered to languish for want of exertion, or are prematurely worn out by over fatigue. Great injuries, and even fatal diseases, are often produced by following trades and callings in which ingredients of a deleterious nature are used, or from acrid or poisonous vapours engendered in manufacturing processes, the pernicious fumes of which are either taken in with the breath or absorbed in the pores of the skin.

It thus becomes quite clear that the injurious influence of different occupations is caused by a comparatively few circumstances, the most prominent being the degree of exertion, of elevation or depression of the temperature, exposure to atmospheric vicissitudes or extremes, the sedentary or other peculiar character of the calling, and the presence of noxious exhalations.

Be the pursuit, trade, exploit, or calling of an individual therefore what it may, whether of a passive or of an active nature, yet, if he be determined to preserve himself from the effects of a premature and improper demand on the

bodily vigour, and possess a mind capable of conceiving a just plan, and corporeal powers capable of carying it into execution, he must himself be the best judge as to the how, the when, the where and the what, with regard to the means of removing or counteracting evils. His first business should be to ascertain the extent to which he may exert himself in any direction without deteriorating his physical powers, or obstructing the healthy performance of their functions. He should watch and observe what particular workings in a given employment are detrimental, and in what manner the baneful modes and influences operate. He should notice whether diseases are caused, as a general rule, by excess or by defect in the exercise of certain parts of the body, for, after all, more depends upon the individual than upon the occupation.

The most illiterate, were they not more reckless than they are ignorant, must be well aware of the bad effects of pent-up workshops as well as of other evils attendant on their trades, and they might do something for their own relief, though the grievous deficiency of scientific knowledge prevent them from perceiving complete and effectual remedies, and, in too many cases, of even appreciating them when pointed out by others; nay, the greatest

impediment of all is, that workmen are too generally unwilling to adopt improvements even when it is evident that they in many occupations would have a tendency to lighten, if not wholly remove obstructions to the free development of their physical powers. It is really matter of deep regret to find that almost all suggestions for the amelioration of local personal sufferings we endure in our callings are received with suspicion, and cannot without difficulty be introduced.

It may, therefore, be hoped that the advantages of Industrial Education, now so exclusively set on foot, will be properly appreciated, and that appliances unknown to or rejected by the present generation of Operatives will be gratefully and cheerfully adopted by the rising one, and wisely carried out.

In this Country there are Five great Classes of Society.

FIRST CLASS.

Persons independent of business, and labour, consisting of the Nobility and Gentry, Annuitants, and all others not dependent on employment for a livelihood.

SECOND CLASS.

Persons who work with the mind more than with the body, consisting of men engaged in Literature, Students, Statesmen, Officers of the Army and Navy, the Clergy, the Medical Profession, the Legal Profession, Men holding sedentary Government employments, and others engaged in public and private offices: Architects, Surveyors, Engineers, Monetary and Commercial Brokers, Persons engaged on the Newspaper Press, all Persons connected with or dependent on the various Sedentary Professions, Parochial and Church Officers, Public Actors, and females whose occupations are sedentary.

THIRD CLASS.

Persons engaged in Merchandize and Manufactures, Master Manufacturers, Horticulturists, Agriculturists and Land Proprietors, and all persons depending on and connected therewith.

FOURTH CLASS.

Persons engaged as Dealers and Shopkeepers, and their assistants, and others employed by them.

FIFTH CLASS.

Persons engaged in Agricultural labour and Manufactures, Mechanics, Artizans, Miners, Quarriers,

Labourers and Operatives of every description, Soldiers and Sailors, the Police Force, Messengers, Domestic Servants, Porters, Railway Employèes, and Alms-people.

In one or other of these Classes will every individual find himself included.

FIRST CLASS.

The independent man. The feeling that life is without aim or purpose—that it is destitute of any motive to action, is of all others the most distressing, the most insupportable.

The man without an object, subjects himself to inactivity and listlessness. He is either wholly uninformed of the organic laws and principles of his physical nature, or he sets but little value on rational enjoyments; for the stimulating vices which result from want of sufficient bodily employment, or from not being employed at all, too evidently undermine his constitution and tend to shorten his life.

That the proudest faculties of our nature were intended for slothful inaction is repugnant alike to reason and analogy; there is no power of the living economy but needs action, both on its own account and on that of the general constitution.

Indolence was regarded as criminal by the nations of antiquity. It has always been looked upon with detestation by the uncivilized, and is

without countenance from the more cultivated. A life of muscular inactivity leads to imperfectly assimilated food, and therefore to ill-elaborated blood, and, out of such blood, to bad materials for keeping the organs in repair.

The man of ease and independence, instead of indulging in intemperance or in the taking of poisonous drugs, either at his own discretion or by the advice of the apothecary, should put in action his thinking and reasoning powers; and then it would be evident to him, that, though he needs not labour yet he must work, both body and mind, in doing something, if he desires to have health and long life; for muscular debility is the never-failing precursor of disease; and, if means are not taken to stay its progress, the most vitally important of all the muscles, the Heart, will become injuriously affected, and the current of blood will be interrupted, through the inability of that all-important organ to distribute it through the arteries and capillary vessels. Its regular circulation through them is essential to maintain the balance between the action of the different organs by which the expenditure of the system is regulated and secured. Unless this be maintained health must give way, and life will be endangered.

Those who possess the means of gratifying

all their natural and artificial wants, too often make gourmanderie and ease the great leading objects of their occupation, though it is proverbially known to be the universal source of corruption to health, and a sure enemy to length of life.

Such persons lack the stimulus of necessity to awaken their active energies, and many from affluent idleness, arising from the want of some definite object of pursuit, really believe that they are privileged to dispense with all exercise that borders on labour, and content themselves with lounging in the amusements of the fashionable world, and in an injurious round of frivolities, the consequences of which are fashionable complaints, fashionable remedies, fashionable seats of disease, fashionable plans of treatment, and fashionable short lives.

Formerly, nervous complaints were quite the *ton*, —then liver complaints—these yielded the palm to stomach disorders—then followed duodenal ailments, to which have succeeded ossification of the heart, bronchitis, and various others. The most certain specific for contracting any or all of these fashionable diseases, is frequent attendance in a dense-crowded suite of rooms filled with every species of luxury and ease, and

whatever else can be devised to swell the sum total of immediate sensual enjoyment. How the demon of disease gloats upon the empoisoned air which these large assemblies in the very zenith of their enjoyment are inhaling!

According to Dr. Southwood Smith, "When respiration is performed naturally there are about 18 respirations in one minute, 1,080 in the hour, and 25,920 in the twenty-four hours. By each inspiration a pint of air is sent to the lungs—that is, 18 pints in a minute: in the hour more than two hogsheads."

Now, it would be difficult to conceive, but for the facts, that any person, *knowing this*, would deliberately walk into an assembly of a packed mass of living beings, in rooms carefully prepared to keep out every breath of pure air and take into his lungs the respiration of every person there over and over again, if he knew how unfit air is to be breathed that has once visited the lungs, and been rejected by them? Are they aware that as much as 16 cubic inches of air is vitiated by each act of respiration, being thereby divested of its oxygen, and consequently unfit to sustain animal life! It is scarcely possible to give credence to the fact, that so high a class of persons should be so lamentably negligent of a

subject of such importance to them as the sanitary condition of the atmosphere in which they are living.

Cleanlines, most important to health, is just that which is least regarded—cleanliness of the air that is breathed. The most refined persons, who would indignantly refuse to enter a room with soiled walls, and muddy floor, and dirty company, sit complacently in ball-rooms and theatres where everyone is breathing impure air, soiled with the fumes of gas or wax candles, and with other pernicious exhalations. The impurities in which they are steeped are disregarded because they are not visible, and people who are most particular about the materials of their dinner cannot spare a thought for what they are breathing; and yet one is no less important than the other. Builders are well satisfied when they have prevented any escape of air, except up the chimney. But the law of expansion by heat has provided that vitiated breath shall rise towards the great ocean of air in which all impurities are lost by dilution; but our impervious ceilings stop the intended ascent, and drive down the cooled carbonic acid gas to be again inhaled with injurious result.

Upon a first glance at the subject, persons are apt to look only at the great general thorough-

fares, and to lay great stress upon the currents of air carried off by the main streams; but they lose sight of the pent-up and sickening courts and alleys which saturate the immovable atmosphere with their impurities, so as to surcharge it with deadly effluvia, which also pass into and pollute the main streams, making the best air we inspire almost poisonous.

Everybody knows the qualities of the fluid supplied by the Thames, the Gigantic Sewer of London, is nothing but a reeking compound of all the filth and abomination which a population of more than two millions of people can cast forth. This pollution is rolled backwards and forwards by the tide, and ploughed up by the steamers under such atmospheric influences.

A heavy responsibility rests upon our rulers, who allow the millions of Her Majesty's subjects in London to be dependant upon the poisoned* current of her noble river the Thames.

If this be the state of things out of doors, and under the best circumstances, how much must the same conditions be aggravated in the case

* The Registrar General in his report of the 10th of September last, states, that about Fifty persons are destroyed in every Twenty-four hours in London by sanitary defects.

of the visitors of such assemblies as those which have just been described.

Among the effects produced by impure air on the constitution and the vital energies of this class, and indeed of every class of persons, none are more dangerous than those arising from crowded Theatres, Assemblies, &c. Among these are the following :—The sudden transitions from heat to cold, and *vice versâ*, the streams of cold air from promiscuous apertures and openings, often injudiciously arranged for ventilating the building; the air vitiated by the effluvia constantly passing off from animal bodies by the medium of perspiration; the numerous exhalations from the lungs of thousands of persons, many of whom are probably in a state of positive disease; the combustion of lights and smoke from nauseous substances, all amalgamated, and confined within a space of a few cubic feet. Such are the component parts of the atmosphere which must of necessity be inspired and respired by every individual in the place for hours together.

These are some of the fertile causes of broken health and shortened existence, that vitiate the banquet of tranquil life, and cause hypochondriasis, tedium vitæ, dyspepsia, gout, and other maladies, to these first-class persons.

SECOND CLASS.

Persons who work by the mind more than by the body, consisting of men engaged in Literature, Students, Statesmen, Officers of the Army and Navy, the Clergy, the Medical Profession, the Legal Profession, Men holding Sedentary Government Employments, and others engaged in Public and Private Offices; Architects, Surveyors, Engineers, Monetary and Commercial Brokers, Persons engaged on the Newspaper Press, Teachers in Schools, Parochial and Church Officers, and all other Persons connected with or dependent on the various inactive or mononous Professions, as well as Females whose occupations are sedentary.

Mental inactivity is the occasion of moral and physical suffering, which to one who has never thought upon the subject would appear almost incredible.

Many of this numerous class of persons suffer from their employments, which are too often pursued at the expense of health and life to an extent far beyond general conception. No attainment made at such a cost, however great, can prove an adequate compensation.

How much vanity is at the bottom of the self-sacrifices of some literary minds. For the sake of a little empty adulation real advantages are forfeited, and even life itself is shortened. They

compel the body to undergo tasks dangerously* severe, and often producing fatal effects. The general ignorance of the laws of our organization, which appears even in those who know much of all other things, induce these evils. The intellectual nature of man is used without due regard to the laws of that perishable frame with which it is connected. To over-task or under-task the body or the mind will never yield results to compensate for mistreated muscles, or sooth a tortured nervous system. Few take into consideration that nearly 400 muscles are thus robbed of their appropriate action.

Men bestow little reflection on the evident truth, that to spend more than a moderate number of hours in mental exercises diminishes, insensibly, the powers of future application, for the whole corporeal system will inevitably give way beneath a severe pressure.

The tasking of the brain to gratify ambitious views, by unbroken day by day meditation; deep and long study by night; loading the conceptive faculties beyond their grasp; perpetual ferment of mind and long thinking; anxieties and cares for various objects; strife for political distinc-

* There is scarcely any book which does not savour of painful composition in some part of it, because the author has written when he should have rested.—Pope Ganganelli.

tions and party success; coveting preferments; contemplation or abstraction of mind, whether it proceeds from necessity, obligation, or free will—all these are equally baneful, by wearing away the substance of their brains, unbracing their nerves and over-charging their blood vessels. The hardiest frame must suffer under the agitations of the mind, and the firmest mind cannot long remain unharmed amid the sufferings of the body,

It is in large cities that this kind of unintentional self-destruction is most prominently exemplified. Ministers, Statesmen, all those who are intently engaged in official occupations during the day, as well as Barristers and the higher classes of professional men and others, not only labour with their mental powers to aggrandize themselves, but, after fagging and racking their brains, pass many hours, nay, half the night, in debating in the Houses of Parliament. How can a course so flagrantly destructive and contrary to the ordinances of nature be justified?

The action of the brain is increased by mere moderate excitement, paralyzed then it must be by excessive thought or anxiety. As congestion, irritation and inflammation, constitute the very essence of morbid action, there are ample sources

of disease among this class of persons. The mind cannot be harassed, nor the temper disturbed, without producing a sensible effect upon the health.

By maintaining one position most of the day, and especially from a proclination of the body by students, clerks, or others, stooping over their work, the thoracic and abdominal viscera are unduly compressed together for many hours, the margin of the ribs is forced upwards so as to drive the stomach against the diaphragm, and to impede the passage through the pylorus; while all the adjacent organs, the blood vessels and excreting ducts, partake of general injury, and thereby concur to excite morbid affections of the lungs or permanent disease in the stomach. Those therefore who are apt, and most unnecessarily, to bend forward, throwing the shoulders upon the chest, which not only predisposes to consumptions, but in other respects lead to bad consequences. It would really seem that they conceived the shoulders, or eyes, or head, had something to do with the mechanical performance of writing, when the hand and fingers alone are called in exercise while writing. Is it not feasible to suppose, also, that heart diseases may be induced by the unnecessary pressure of the ribs or breastbone, so that the heart has not room to perform its functions freely. Pressure

upon the heart may retard the circulation, or, preventing the return of the blood from the head, may cause apoplexy and other distressing results. All the organs should be in full development, and no one should act at the expense of another.

Here, then, we have to lament a wilful destruction of the beautiful adaptation of all the functions to each other, and of the exquisite harmony of design subsisting between the different parts of the body, without which health cannot be expected.

Many students and others seldom change the scene, take exercise, or indulge in any relaxation of mind. Their love of learning detaches them from every other consideration, from their country, their parents, their kindred, from themselves frequently, for the whole of their lives. Pale and wan at all times, in youth they have all the infirmities of age; and even their mind itself, from exhaustion, becomes enervated and cloudy. Excessive exercise of the brain, by propelling too much blood to it and unduly distending the vessels, is quite as injurious as its total disuse.

The man too ardently devoted to learning, to science, or to worldly business, in order to

keep him in health and preserve his life, must have exercise and rest, if not, he suffers, and in a few years, premature old age is announced by decrepitude, decay, and lastly by death. Many, when a great purpose is to be accomplished, consider that a spare allowance of sleep will materially assist them. Let such rely on it that they commit a great mistake. Two hours' work when the powers are vigorous and elastic, is worth treble the application obtained by green tea and cold wet towels wrapped about the head, or even by the resolute will (as is often the case) to go on in spite of fatigue; to say nothing of the injury health sustains from such unnatural stimulants and inordinate study.

The legal profession, when well employed, are overwhelmed with the business they are obliged to go through, and have little time to attend to proper exercise, and perhaps there are none which present such marked instances of self-sacrifice as Barristers, their minds are seldom off the stretch. It is true many of them realize ample fortunes and derive enjoyment in gratified ambition, but should *this* reconcile a rational being to a life that is pernicious to health and existence, and contrary to the ordinances of nature?

Medical men are in danger of infection from

the sick; they live in a state of constant hurry, called out at unseasonable hours; knowing the imperfections of the human frame, they are often alarmed at circumstances which ordinary persons would think little of.

The Clergy live too inactive for great longevity.

Political men are not proverbial for long life, unless they have to retire early from public business. They have the excellencies of numerous rivals to contend with, and ambition, when carried to extreme, is most pernicious to health. The career of the most successful is embittered by the envy and malice of their opponents, and for the maintenance of their own pre-eminence. The ambitious are neither happy in power nor out of it. They infringe the laws of their physical nature; they neglect their needful exercise; they eat and drink as they ought not to eat and drink; they sleep irregularly, and abuse, in a thousand ways, the welfare of their bodies; they think only of the mental, the gross vesture of the flesh is beneath their consideration; and thus, heedless of all admonition, do they continue in their pernicious course till their retribution comes in ruined health and premature decay, thus shortening the career of their being.

Would studious men whose avocations draw especially on the energies of the brain but bestow the requisite attention on the proper regimen of life, they might enjoy as good and uniform a share of health as most other classes of the community.

An opinion prevails, that after a certain age the body has arrived at its full strength, but indolence and not the defects and failure of nature suffer them to creep upon us long before it is necessary. Thus, in effect is life abbreviated by an abject dereliction of our own powers: we abuse time and nature for decays which are caused by our own neglect. In addition therefore to the evils just mentioned, many of this class of persons, when advancing in years, for want of understanding the constitution and structure of the human frame, consider that, because they are growing old, the little labour they do take must, as a matter of course, be curtailed, although their strength does not fail them; and that their nourishing diet must be increased, although there exists little to indicate the necessity for it, as would be apparent to any person having a clear conception of their own nature.

These gross and palpable improprieties they encourage from positive habit. Abundant

opinions are also gratuitously offered them on these points by their would-be friends; yet, if such opinions were scrutinized, they would not only be found groundless by the effect, but would also prove to have been formed without the slightest organic knowledge.

Persons whose places of business are probably three or four miles or more from their residences, and who have for years walked to and fro, no sooner arrive at the age of fifty years, or less, fall into the indolence of old age prematurely, and begin to consider themselves entitled to be conveyed thither, either in their own vehicles or by public conveyances, (which are become so numerous and economical as to afford riding facilities to every class of persons); they thus relinquish entirely the little exercise in the open air they have for years taken, though probably the chief cause of keeping them in health.

By lessening their labour, they lessen their inhalement of pure air, and, in a very short time, they inevitably begin to experience a falling off of the appetite, depletion, and other weaknesses, which, from apathy and inaptitude, they quietly set down as the effect of getting into old age; while the truth is they are encouraging these evils and making themselves *prematurely* old. The very sensations of age of which they com-

plain are, in nineteen cases out of twenty, caused by the indolence for which they have exchanged their ordinary and natural labour, and by indulging too freely in more nourishing foods and drinks. If their organs cannot manufacture a daily supply of blood for repairing the wear and tear of the constitution, it mostly arises from the causes just pointed out, and can be repaired only by determined and riged abstinence from the indulgences which have obliterated and closed up the small blood vessels; such as feasting, improper drinking, late hours, inactivity, and, above all, immoderate drugging. How often do you hear men find fault with the integrity of a healthy stomach, because it tells them when they violate its constitutional laws, and causes them distress, as a penalty for unrighteously gratifying their sensual appetites, more especially when exercise is neglected. Everything that hastens vital consumption shortens life, and consequently the more intensive the vital action, the shorter the life.

The great English malady is the wear and tear of the system, and an over-wrought brain. The man is not harmed by the sweat of his brow, but the labour of his brain causes the appearance of anxious old age, even before the arrival at middle life. Those multiform and painful maladies which now afflict and shorten

his career are, obstructions of the liver, kidneys, and bladder; weakness and disease in the stomach and the heart; feebleness of the limbs; stagnation of the nervous blood; piles; ulcers in the lower extremities; fistulas, and a crowd of other ailments.

To counteract all these disturbing causes, men have had recourse to artificial aids. Science and experience have been tried; but, alas! to very little purpose. Nature will not, cannot brace up a shattered system of nerves, nor restore a worn-out digestion.

THIRD CLASS.

Men engaged in Merchandize, Master Manufacturers, Commercial Men, and others.

This class of persons frequently spend most of the day in their counting-houses or warehouses, which are so contiguous to each other, as to preclude them from taking proper exercise. The animal operations are sacrificed to calculations, speculations, and commercial arrangements.

Their main object is to attain wealth at all hazards, and, as they say, to increase their means of happiness; but, alas! will wealth remove functional or structural maladies? When health is sacrificed, and life abbreviated for the acquisition of property, what happiness have they in exchange? Excitement is the grand emotion they display, leading to an inordinate application of mind. Disappointments in commercial life ever prevalent; petty rivalries; insufficient returns in anticipated successes; pecuniary embarrassments, and the solicitude inseparable even from success—these keep the mind in a perpetual ferment. Care attends the most promising speculations. The mind is vibrating

continually between hope and fear: the very enthusiasm of success is baneful and distress both strength and spirits. Then come sudden falls in the market, with prices as much below the fair reasonable point as they were perhaps before above it. At other times they have to bear up against gluts and bad times: at one period they are under the exciting influence of hope, and at another are on the borders of despair. All again revives, and expectation is once more raised; but then ensues a sudden reverse, and deeper depression follows.

Now, all these alterations of feeling, pressing upon the mind, disturb the cerebral action, and often do irreparable injury. In truth, these men exist in a whirl of excitement, at once partial, irregular, and excessive. The want of action wastes their muscular system, excess of action wears out their nervous system; and the operations for which nature designed their vital energies are relinquished, and other operations which were never contemplated are unfortunately established.

To add to all the fever and the fret of life many fly to the bottle and the table. Eating and drinking without thought or care, they take into their stomachs immoderate quantities of

deleterious substances, which, by unnatural preparation, are rendered hurtful. They experience distressing sensations of sinking, want, and languor; they neglect to strengthen their frames by exercise, become indolent, and then they say it has pleased the Almighty to visit them with a weak constitution. So seldom are the rational powers of man, when absorbed in large undertakings, at leisure to investigate the adaptibility of his diet and habits to the laws of organic vitality!

Much harm is done by excitements arising from controversies. Anger ever makes a fearful inroad upon the mind, and introduces confusion and derangement through the whole body. All the vital organs suffer from a paroxism of rage. The severity of the shock, suppressing the heart's action, sometimes proves fatal. Apoplexy, hemorrhage, convulsions, and other serious consequences are apt to follow a fit of anger, and terminate existence.

It is a mistake, pardonable only in a lunatic, to regard loss of health as inevitable, when it is owing to the strenuous prosecution of stated duties, or of commercial or any other pursuits; for any such necessity might be averted, by limiting ambition, diminishing engagements, and abiding by the rules of moderation.

Keeping the spirits always on the stretch, and carrying the anxieties of business into the hours set apart for repose, are highly improper. It is the part of true wisdom to detach the mind from any subject found to engage it too closely.

Superabundance of monetary affairs, and adverse events flowing from general excitement originating in that superabundance, are especially dangerous. Many, exposed to these circumstances, pine away in sorrow, are racked with suspense, or are sick with deferred hope. They cannot discontinue and cast off their sufferings whenever they please, for the fear of want corrodes the mind. Those who too frequently fly to the bottle for relief should weigh well their rashness. Wine and spirits, to these persons, "should not be measured out by cups, but by consequences!"

This class of society is, therefore, in a similar condition to the last, as regards their health and life; and if, like them, called upon by the necessities of their vocation to infringe any of the great organic laws, they should be so much the more careful to fulfil every other condition of health and longevity. More especially those whose zeal is more of the sedentary and contemplative than of the active and energetic kind.

FOURTH CLASS.

Men engaged as Dealers and Shopkeepers, their Assistants, and others therewith connected.

Many of this numerous class, who fortunately are in health, well know upon what a fine point it is poised. Late and early in the shop; exhausted by almost unrelieved confinement to business; breathing a contaminated or an adulterated air, at any rate inhaling an atmosphere far from possessing a proper amount of the vital principle, and therefore, incapable of fully decarbonizing the blood, and duly exciting the nervous system; they often drag out an existence, from their unbroken seclusion, ever ailing.

To get money is their first great law. Alas! of what avail is success, if they loose all natural appetite, and with it the power of digestion and the free circulation of blood? To be rich on such conditions, as I have said already, is paying dearly for those riches. Most of these people, from similar evils, viz., labour conducted under anxiety of mind, are subjected to many of the disorders which those of the third class suffer.

Getting into a constipated habit, they contract

a perfect mania for physic-taking. Day after day they toil in close warehouses and shops for twelve or fourteen hours, hardly knowing what exercise in the open air is. The very hours of rest are abridged by the duties of business. From eight o'clock in the morning to very late hours at night, many trades are followed, without any but the shortest intervals for relaxation. Upon a stomach enfeebled with exhaustion they take a heavy meal, which often goes undigested for want of leisure.

One half of these persons, however, might find some opportunities for exercise and repose, if they would but avail themselves of them; but they quietly put up with one unvarying round of sedentary employment, in places shut up from the air of heaven, exibiting unfailing symptoms of the sad results in their puffed up and pallid countenances. Some stand behind the counter all day; others sit, without moving, in a small apartment; a third class are continually on the move, and yet in a manner which never amounts to exercise. To all alike is precluded due corporeal exertion; and the organization thus becomes susceptible of disease, and the average span of human life is miserably cut short.

It is a great mistake in this class of persons

to suppose that the labour of the day is equivalent to exercise; their work is a mere routine process, carried on in a confined atmosphere, and in a temperature more exhaustive than restorative. Walking in the open air would exercise those muscles that may not have been in action all day. Yet, so intent are they on their occupations, either from choice or from necessity imposed upon subordinates, that recreation and amusement seldom enter their thoughts. Such of this class as make the acquirement of riches, whether from the manufactory, the warehouse, or the counter, the chief aim of their lives, no doubt have much empty enjoyment in the gratified ambition to be wealthy.

Hurry and bustle are injurious to health. Arrangement, method, punctuality, and zeal, would often save wear and tear of the spirits, and enable the most busy to get through their labour without fatigue; and yet, how few have the ability or the disposition to adopt them!

Commercial travellers are foolishly induced to take too much alimentation and drink with those with whom they have business, and frequently destroy their constitutions by intemperance; not generally by drunkenness, but by daily taking more liquor than nature requires, and so sinking into an early grave.

FIFTH CLASS.

Persons engaged in Agricultural labour and Manufactures, Mechanics, Artizans, Miners, Quarriers, Labourers and Operatives of every description, Soldiers and Sailors, the Police Force, Messengers, Domestic Servants, Porters, Railway Employées, and Alms-people.

The number of trades and callings in the United Kingdom are about 973, pursued by nearly eleven millions of human beings.

The principal agencies in this great bulk of industrial occupations affecting the human constitution are, the degrees of physical force called out in the performance of each class of labour, the temperature in which that force is exerted, and the atmosphere wherein it is put into action, together with the nature of, or materials employed in, their respective businesses.

They may be arranged as follows:

Employments. In the open air.
In an atmosphere confined and impure.
In wet and steam.
In a high and varied temperature
In dust, odour, or gaseous exhalations.

Some of the principal movements practised in the various trades and callings, shewing their injurious tendency with reqard to health and life, viz. :—

The heaving or rising up posture.—The exertion to the upper limbs with the aid of the flexors and muscles induces too great perspiration, and acts with undue force upon the respiratory organs.

Lowering or letting down.—Is the reverse of this.

Lifting.—Accelerates the circulation of the blood, frequently if violent, causing Hernia.

Turning.—Affects the vessels, nerves, muscles, and abdominal organs.

Contortion.—Affects the intercostal muscles and the passive movement in the bowels.

Rotation.—Produces giddiness, and affects the lungs and heart, inducing nausea.

Pulling.—Produces relaxation of the ligaments and nerves.

Holding.—Affects the circulation of the blood.

Balancing.—Puts a force upon all parts of the body.

Pendulum.—Causes giddiness and trembling.

Knocking.—Produces vibration of the spinal marrow.

Tapping.—Leads to irritability of the nerves.

Clapping.—Promotes tendinous expansions.

Chopping.—Affects the muscles of the chest.

Sawing.—Affects the capillaries or minute blood vessels.

Kneading.—Affects nutrition and the circulation of the blood, the muscular and other tender parts, and causes rheumatic swellings under the skin.

In walking.—The muscles of the trunk, neck, and throat, are in active motion.

Running.—Causes preternatural developement of the respiratory organs, and destroys the immobility of the thorax.

Fencing.—As well as all violent exercise has an influence upon the brain; the eyes, ears, judgment, power of stratagem, &c., are all engaged.

Standing Position.—Affects the hips and knees; in standing on one foot the strain is very great, swelling the œdema, retina, &c., and causing varicose vein. Long standing affects the digestion.

Sitting Posture.—Gives rise to many diseases varying with the occupation; continual pressure is produced on the nerves and other organs of the abdomen, bad digestion, bilious disorders, gravel, flatulency, piles, swellings of the liver and spleen, constipation of the bowels, excitability, head-aches, giddiness, singing in the ears, bad temper, inability to hold the head erect, and difficult breathing.

Lying.—If too long, produces congestion, irritation, inflammation, drowsiness, and relaxation.

Stooping, leaning, or bent.—Affects the circulation and induces many ailments :—Congestion, veins and trunks compressed, the contents of the stomach be expelled with sufficient rapidity; deformity so as to affect the figure and capability of motion.

Frictions.—Affect the sensitive nerves of the skin, which are more or less stimulated.

These movements or deficiencies of movement, with their results as affecting health, should be duly understood by all those on whom they act.

The General Effects of ACTIVE *Movements, are,*

That all the functions of the body are accelerated.—The brain exercises a greater nervous influence.—The activity of our senses is considerably increased.—The texture of the heart maintains a greater force —Exhalations from the lungs and the expiration of carbonic acid gas are increased.—The appetite is sharpened and the movements of the stomach and intestines become stronger.—The secretions and excretion of bile are augmented and the bones are more developed.

The General Effects of PASSIVITY, *or Defective Movements are,*

Increase in the activity of the assimilating organs, and a kind of atrophy in the muscles which make men less fitted for locomotion. Fat is deposited in greater quantities between the muscles and under the skin. The capillary and lymphatic vessels are either contracted or expanded, and often congestion and inflammation are produced.

The grand object, therefore, is to select and practice such movements and positions only as will cause the organism of the body to gain different advantageous modifications from these

varieties of practice, none of which perhaps can be entirely dispensed with, and so by a due counteraction and antithesis bring and keep the body into as perfect harmony as is possible with the laws of life.

EPAMPLES OF VARIOUS TRADES, ETC. THOSE WHO WORK IN THE OPEN AIR.

Husbandmen and Agricultural Labourers are exempted from many disorders to which other occupations are liable. The diseases to which they are subject are imputed chiefly to cares and anxieties from variation of seasons, deficiency of markets, &c., and from cold and moisture; exposed to all the inclemencies of the weather, the south and the north winds; soaked in rains; scorched with the beams of the summer sun, which excite the whole mass of fluids and predispose them to asthmas and dysentries.

Mariners pass their lives in an element fertile of danger, and of hardy endurance; they are subject to disorders from salt aliments and many deprivations.

Soldiers are often subject to a long train of evils, in conjunction with fatigue, rain, heats, colds, and other hardships, which cause fevers and dyspepsia.

Cattle Dealers and Butchers have only temporary health; they live too fast for long life, they become plethoric.

Horse Dealers, leading active lives in the open air, would be almost exempt from ordinary maladies but for hard drinking, which counteracts all other benefits.

Stage, Hackney Coach, Omnibus and Cabmen, have little muscular exercise to counteract their irregular modes of life and the ill effects of the frequent potations they have recourse to; and hence they are liable to venous congestion of the abdomen as well as to apoplexy and palsy.

Ropemakers and Gardeners, from the stooping position induces many ailments, the contents of the stomach are tardily expelled.

Coal-heavers and Whippers, Ballasters, and Brewers' Draymen, take large quantities of beer and become plethoric and bloated.

THOSE WHO LABOUR IN AN ATMOSPHERE CONFINED AND IMPURE.

Miners, working in constrained positions, are subject to peculiar diseases and influences which

prey on their strength, and bow them down to the ground at an age when other labourers are in the vigour of life and strength.

Metal-diggers are liable to difficulty of breathing, and the lungs which take in the mineral spirits along with the air, and are mingled with the blood, effect the respiration, and cause asthma.

Potters make use of burnt and calcined lead for glazing their wares; it often raises a dangerous dry cough.

Glass-makers are obliged to stand in cold seasons half-dressed by heated furnaces to work, with their eyes fixed upon the fire, and are often seized with insatiable thirst, and subjected to catarrhal diseases.

Blacksmiths are subjected to disease from the violence of the fire, as well as the sulphureous effluvia which exhale from the hot iron.

Tailors are subjected to disorders of the stomach which undermine the springs of life; and their constrained posture, obstructs the proper movements—they are always liable to attacks of catarrhal opthalmia.

Milliners and Dressmakers, and females in

general, employed in sedentary occupations, suffer grievous injury; the bent posture in which they sit impeding the digestive processes, the circulation, and the breathing.

Too many persons work in the rooms of the great cloth-working houses in the manufacturing districts, certain classes of muscles are for twelve hours a day scarcely moved, and postures maintained injurious to the proper action of the internal organs. Many of these persons execute operations almost too delicate for the human touch. It is the same

> "Giant arm which twists the largest cable that is required
> To spin from cotton Plant an almost gossamer thread."

Weavers working in confined air, and in stooping postures, seldom enjoy good health.

Shoemakers also sit in an injurious posture. Their digestion being much impaired, they are subject to frequent bowel complaints.

Letter-press Printers are kept in a confined atmosphere: but the labours of pressmen are varied, and involve general muscular action.—Compositors are often injured by lifting the types when hot, which emit a fume highly detrimental to respiration.

Carvers and Gilders perform their duties in a leaning posture in poisonous steams, and not unfrequently become asthmatic and paralytic.

Waiters at Inns, being irregular and also dissipated in their habits, are hardly ever in health.

Jewellers, *Watch-makers*, *&c.*, from their sitting postures, do not enjoy average good health, but, on the contrary, the majority are ailing and debilitated.

Workmen engaged in "chasing," "hampering," "mounting," &c., are compelled to sit: they constantly lean against their table, and press the chest or the pit of the stomach against an unyielding substance, and the region of the stomach suffers.

Law Stationers, *Laborious Clerks*, *Engravers*, and the like, are all subject to contracted chests; their muscles of respiration are enfeebled, and the lungs have a diminished power of action, with irritation of the bronchial tubes.

THOSE WHOSE AVOCATIONS EXPOSE THEM TO WET AND STEAM.

Fishermen live in a moist air; their bodies are

hardened by the sun and vapours; and their diseases are of a scorbutic nature.

Laundresses being confined to moist places, their hands and their feet being continually wet, are subject to varicose veins, by the constant standing over the tub, or from poisoned hands, through the venom of bleaching powders and strong alkalies.

Brick-makers are exposed to the heat of the sun in forming the bricks, and to a greater heat in laying them in furnaces; they are exposed to all weathers, and are often wet through; are racked with rheumatism, and subject to acute disorders.

Tanners work in an offensive odour, and in an atmosphere strongly impregnated with the vapours of putrefying skins. They are exposed constantly to wet and cold.

Dyers are exposed to currents of air all day in wet rooms, inhaling steam, with their hands and arms in water.

Brewers, &c., are in constant steam and wet, and are far from being strong. Their ill-health is, however, chiefly attributed to habitual potations of beer.

THOSE WHO WORK IN A HIGH AND VARIED TEMPERATURE AND EXTREME HEAT.

Bakers are unhealthy from the dust which is inhaled, and the temperature in which they are placed. This subjects them to cough and rheumatism, and the Bakers' scrofula.

Cooks and Confectioners are placed in similar positions, they are in addition injured by the suffocating quality of the charcoal, the copper pans, and the exhalations of the melted sugar.

Smiths and Workers at Furnaces and Forges' frequently become amaurotic from the great glare of the fires.

Grocers from the handling of sugar, &c., suffer frequently from a skin disease affecting the fingers.

Braziers besides disorders of the head and ears, from various exhalations and effluvia from the brass, are subject to violent diseases of the stomach and lungs.

Cutlers and Razor Makers are subject to inflamation of the eyes, and to vertiginous disorders.

Soap-boilers are obliged to labour hard in a

place mostly with a continual fire in it. Which subjects them to constipation, and other disorders.

THOSE WHO ARE ENGAGED IN EMPLOYMENTS WHICH PRODUCE DUST, ODOUR, AND GASEOUS EXHALATIONS.

Persons who mix and use verdigris, &c., are affected in the same manner as painters from white lead, they become prematurely old.

Polishers of Steel and Grinders of Iron suffer from the stomach and bowels, by the great use of emery and oil.

Tin Pewterers, *Enamellers*, and all those employed in melting of tin, suffer from the arsenic which it contains.

Workers in Quicksilver are liable, in addition to affections of the teeth and gums, to a species of shaking palsy, or tremor of the limbs.

Modellers in Coloured Wax, *&c.*, are in danger of absorption through the skin of the poisonous colouring ingredients.

Water Gilders, and Looking-glass makers are exposed both by inhalation and touch, to the action of mercury oxygenized by the atmosphere, suffer severely from tremors of the arms, wrists, and

hands which frequently terminate in paralysis. Ventilation, and the management of currents of air through the workshops, should be carefully regarded.

Preparers of Vermilion, Sublimate, &c., are frequently visited with distressing symptoms. Ores of tin, antimony, &c., contain a portion of arsenic, the fumes of which seldom fail to injure the body.

Maltsters are exposed to the dust and sulphureous fumes arising from coke, and stand continually in the heat or the kiln. They are subject to pulmonary complaints.

Coffee Roasters, from the odour and dust, become asthmatical, and complain of difficulty of breathing, and cough.

Paper Makers suffer most from the dust in cutting the rags.

Cabinet Makers and Turners suffer seriously from the dust of hard woods, and are subject to diarrhœa and indigestion.

Masons, Bricklayers, and Plasterers, inhale particles of stone and sand, and endure vicissitudes of weather, are also addicted to intemperance, and consequently are subject to disease.

Coppersmiths and Brassfounders are injuriously affected by the fine scales which arise from the imperfectly volatilized metal, and by the fumes of the speltic or solder of brass, and suffer from disease similar to braziers.

Many of the manufactures of Sheffield are detrimental to health from the severe bodily exertions which they unceasingly demand, and the varying degrees of temperature to which the workmen are exposed. Thoracic diseases prevail to a great extent.

Plumbers are exposed to the volatilized oxide of lead in the process of casting.

House Painters seldom attain the full age, from their continued use and inhalation of white lead and other deleterious substances.

Chemists and Druggists are exposed to various odours, and to the evolution of gases, many of which are prejudicial to health.

In short, there is scarcely a trade, or profession, which does not expose its follower to some peculiar ailment; yet there is scarcely one of these ailments which may not be prevented, or at least much allayed, by proper care and attention to the various prophylactic means of relief.

In these multifarious callings and pursuits are all persons more or less engaged throughout their lives; and, in proportion as their occupations operate unduly upon their health and strength, so will it affect the duration of their existence. From the luxurious noble down to the common day-labourer, we see that, from unhealthy occupations or the want of healthy ones, men are continually perishing, self-immolated victims of those violations of the laws of health, which, as if to deceive ourselves by fathering the fatal results upon an external enemy, we attribute to that fabulous monster named "Disease."

One stands aghast on surveying the formidable array of the great classes of human beings who are betrayed, sometimes by the necessities of their vocations, but sometimes by other causes not necessary, into the infringement of many of the great organic laws.

These infringements are, as I have shewn, directly or indirectly the fertile cause of broken health to myriads of both sexes. As few of us are completely exempt from these injurious habits and customs, we should the more carefully bear in mind this great consideration, namely, that, unless we ourselves embrace every opportunity afforded in the prosecution of our re-

spective callings, of employing the proper means to counteract as much as possible the dangerous tendency of the infringements in question, no power on earth can effectually shield us from disease, and consequently from a shortened life.

Notwithstanding this incontrovertible truth, strange as it may appear, we deliberately suffer the inherent properties of our mind and constitution to lie dormant on occasions which summon us to the exercise of our strongest powers, in order to counteract the evil fruits of such infringements. And why, let me calmly ask, are we thus grossly blind to our own preservation? just because we remain in wilful ignorance or wilful neglect of the structure and functions of the human body, attention to which would at once open to our view the peril of suffering it to fall into disorder.

The conditions therefore being fairly placed before us, on which the production of detriment and of benefit depend, it lies henceforward with ourselves to accommodate our conduct so as to make their relation to us as much of a beneficial, and as little of an injurious tendency as possible.

CHAPTER V.

MEDICINE, AND MEDICAL MEN

"No men despise Physic so much as Physicians, because no men so thoroughly understand how little it can perform."—COLTON.

I proceed now to draw the attention of the reader to considerations involving the health and lives of mankind, issuing from institutions which have existed for many generations, although they have been proved and declared to be false and dangerous; and to submit, whether reflecting men are to continue subject to a set of obsolete dogmata heretofore received as medical oracles, but now seen to be unworthy of serious regard; —whether, in fact, they are still to pay homage to the supposed sanctity of established forms on which the faculty are themselves divided, and to

follow the advice of self-appointed counsellors who cannot agree among themselves.

Would that I could add, that those who profess the science of medicine have, from experience and research, consented to explode its absurd dogmas, and that obstacles to a candid confession hitherto found insuperable, have been at length surmounted; but, alas! medical science, or what passes for such, is, even in these enlightened times, still attended with its protean hosts of conflicting hypotheses, and its still more contradictory practices.

Did persons take a review of the multitude of deaths which are perpetually occurring around them, many of which are of so questionable a nature as to leave the minds of survivors in a state of doubt and suspicion, and also of the endlessly diversified and contradictory practice of medical men, and of the poisonous properties of the drugs they administer one after another,—they would begin to consider that it was high time to seek for some security against the frequent failures of the faculty to remove disease, especially when they found, as in most cases they surely would, that notwithstanding all their boasted pathology and learned talk about diagnosis, disease could, in many cases, only be guessed at.

In July, 1838, The late Dr. James Johnson, Editor of the Medico Chirurgical Journal reviewed a little work on health I had published, called the "Alternative," and his remarks were so expressive of the general opinion of the medical profession, that I shall make them the basis on which to found my expositions.

To question the opinions of a physician, and an accomplished writer in medical literature, may appear somewhat presumptuous in one who is not of the profession of medicine; but long experience and observation of the laws which govern health, have taught me not to suffer myself to be thwarted by arguments from which I feel that I have reason to dissent, however high their source, nor to abate my honest zeal in pursuit of a subject upon which I have been long and anxiously engaged, from mere deference to medical authority.

First, then, Dr. James Johnson says, "that the author had composed a volume of excellent didactic rules and precepts, for maintaining health and attaining extreme old age. These rules and precepts have but one fault; namely, that the world *cannot*, or *will not*, put them into practice." That the world *cannot*, is a proposition on which, with all due submission, I

differ entirely from Dr. James Johnson; and will explain the grounds on which I do so. That the world *will not* put these rules and precepts into practice, is, I submit, the world's own fault.

Secondly, Dr. James Johnson says, "Mr. Pinney thinks that every man knows, or may know, every thing that is necessary or conducive to health or happiness." And why, I would fearlessly ask, should he not? Is he not endowed with reason? And for whom ought that reason to be exercised? Has he not a power of choice? Is he not sufficiently free, and may he not be sufficiently enlightened, to comprehend as well as any medical man, the advantages resulting from the enjoyment of sound health?

The comments of Dr. James Johnson, on which I intend principally to enlarge, are those which refer to the following paragraph in the "Alternative:"—

"Is it not within the power of man to observe "and judge of the quantity and quality of his "diet? To consume no more at his meals than "nature demands? To avoid inhaling a confined, "impure, or otherwise unwholesome air? To "take daily *active* exercise? To rise early in the

" morning, and to retire to rest early at night? To " ensure the proper discharge of sensible and " insensible perspiration, by exercise and daily " ablutions of the body? To refrain from taking " deleterious medicine, and to pay a strict re- " gard to the alvine exonerations?"

" Now," says Dr. James Johnson, " to every one of these questions we *might* answer in the negative. The physician of fifty years' standing and experience *would not be able to judge* accurately on all these points; and, if so, how would the world, who have their various avocations and callings to pursue, and to occupy their time, be capable of determining such difficult problems in *physiology, hygiène, and therapeutics?* "

" ——— Read o'er this,
And after this; and then to breakfast
With what *appetite* you may."

What! are the discoveries of so many celebrated men, the accumulated harvests of the last half century, so utterly valueless, that even medical practitioners are yet unable to form a correct judgment of the result of excess or defect of diet, of indolence or over exertion, and of irregular modes of living? or, in other words, to determine what and how much food nature requires? what and how much exercise and rest? how to regulate the body, and keep it free from disease?

Allow me to ask, gentle reader, what benefit the world can expect from lectures on medicine, when the lecturer himself confesses that no precise rules can he given to guide practitioners in the treatment of diseases, nor even in determining what ought to be left to the unaided powers of nature.

Medical men, in their writings, say, "After all that reasoning could urge to caution men against an indolent and luxurious life has been urged,—after all that argument could propound, to show the dangers resulting from it, has been propounded by the faculty, and still without success, what more can be done?" Are we then compelled to proceed in the dark, and quiescently subject ourselves to all the consequences of such a science, as scarcely disputes its own inadequacy to limit or define the operations of nature. Now, professional treatises on health, which do not exhibit a proper estimate of the false maxims and evil customs that deprave our natural desires, nor show the principles and rules by following which everyone might preserve his own health, are little better with all their learning, than so much spoiled paper. The doctrines they promulgate may have become venerable from lapse of time, and may even be overflowing with undeniable truths; but, unfortunately, those truths do not

comprise the *whole* truth; nothing short of which will ever induce men seriously to consider their own capabilities to preserve themselves from the consequences complained of. We are endowed with an intellect, which, if properly exercised, would render us fully competent to liberate ourselves from the miserable predicament of dragging on a wretched existence without a remedy to remove the evil.

A difficulty, no doubt, does exist in arriving at a right conception of *what to do, and what to leave undone*, so as to secure health; seeing that the modes founded on the practices of the present epoch in civilized life have egregiously failed; and that medical men do not consider it to be their province to advise or prescribe anything but pills, powders, and potions. Fortunately, however, this difficulty *can be removed* by all persons sincerely disposed to make themselves moderately acquainted with the laws of life, as set forth in this work, together with the observance of the rules laid down therein, which would enable them to appreciate the operation of the agents which produce health, as well as of those which counteract it, and thus they would no longer hesitate what to do, and what to leave undone, in order to insure sound health and length of life.

Drugs and *medical advice* comprise Dr. JAMES JOHNSON's *Creed* for keeping the community in health; but that must be at the best an imperfect, if not a spurious kind of health which can be maintained by the mitigating or the stimulating aid of physic. Literally construing the poet's reference to "the thousand ills which flesh is heir to," they allow their patients to suppose that every disorder is inevitable, and, though they sometimes cure the present ailment, they scarcely ever hold out any hope of preventing their recurrence.

Deliberating on the avowed doctrines of this eminent authority, I naturally concluded, that at any rate, they were carried out uniformly, and that, in acting upon them, no essential difference could exist. I therefore took a cursory glance at the history of medicine and medical men from an early period down to the present time. The results of my researches I now beg to lay before my readers.

Mankind were naturally led to the origin of medicine from casual observations on the diseases to which they found themselves subjected! and that, therefore, in one sense at least, it is as ancient as the human race. It was as natural, it seems, to ignorance and barbarism to combine religion with physic, as it is to a civilized and

enlightened people to keep them separate. The only physicians of the Egyptians were either priests or conjurors. Their remedies little else than superstitious observances, combined with the simple rule of attention to air, exercise, and bathing.

Hippocrates is the most ancient medical author whose writings have come down to the present day; and he is consequently regarded as the father of medicine.

It appears that after the death of Esculapius's two sons, there was a total blank in the history of medicine for eight hundred years; during which long period its practice was confined exclusively to the priests.

After medicine had remained for a long time in such hands, a spirit of philosophical research began to take possession of the human mind; and medical science, which had hitherto been pursued, to a great extent, for the most selfish purposes, and had been mysteriously concealed, was destined to fall into more liberal hands; namely, those of the Grecian philosophers.

Pythagoras introduced his peculiar notions about numbers, and the supposed influence of the heavenly bodies; Democritus applied his

hypothesis of atoms; and Heraclitus his theory of ether and the elements; and all to explain the effects of disease.

There were two rival sects, the Dogmatists and the Empirics. According to the Dogmatists, it was essential before we attempt to cure disease, that we should make ourselves acquainted with the structure and functions of the body; with the changes that are produced in it by various morbid causes, and with the action of remedies in removing or counteracting them. The Empirics, on the contrary, maintained, that the knowledge which the Dogmatists supposed to be necessary, is not to be attained, that by our utmost efforts and most elaborate researches, we can never acquire that insight into the operations of the animal frame, which will serve to direct our practice.

Galen, when pursuing his studies. began to perceive the futility of the prevailing systems. Dissatisfied with what his masters taught him as incontrovertible truths, he read the works of Hippocrates, and was struck as it were with a new light. Nature became again obscured, and the art of medicine was still entangled in unnecessary difficulties.

Boerhäave framed a theory of medicine upon

the supposition of acrimony and other changes in the circulating fluids. Hoffman and Stahl both deviated from this theory. The former laid the foundation of the spasmodic hypothesis, by referring the origin of all diseases to a universal atony, or a universal spasm in the primary moving powers of the system. The latter resolved disease into the action of certain noxious agents.

Mr. Abernethy, pupil of John Hunter, subsequently affirmed, that most ailments of the body proceed from derangement of the stomach and of the digestive organs. We were told also, that all diseases, no matter how originating, are attributable to the state of the blood. To this doctrine succeeded another; namely, that all diseases originate in the solids. This notion divided medical opinions; and whether in the solids or in the fluids, disease first originated, is a point (however extraordinary it may appear) not thoroughly settled even at the present day. The chief feature in the views of some practioners, is, that all diseases may be traced to general inflamation, while others ascribe them to the inflamation of some internal organ. For a time, the liver was considered the only organ of the body worthy of attention; but the invention of the Stethoscope, caused the liver, the stomach, and even the digestive organs, to be sadly neglected for the heart and lungs, which

alone became the favorite organs for consideration. What is yet more extraordinary, it was contended that the diseases of these structures were little understood until the introduction of that instrument. Derangement of the skin then became the leading object to which medical practice was directed; so much so, that to some alteration or other of its functions, almost every malady was customarily traced. The skin-deep notions served for a while to solve every possible difficulty; but this superficial system, after it had run its course, was destined to give way to the hypothesis of every thing being traceable to disorders of the mucous membrane. Broussais, the medical dictator, as he is called, raised it to eminence, and denounced all methods of cure as ineffectual, if the mucous membrane had not been first prescribed for; nor is this extraordinary doctrine even now exploded.

The bile also, it appears, has much to answer for. It is affirmed to contribute materially to disease. Indeed, every organ and function in the human frame, has in turn been said to be deranged by it. No matter what were the symptoms, the disease was designated billious—whether in the head or in the feet, the bile had done it all.

Ossification and other affections of the heart

were with many, the universal disease; but I think it may fairly be doubted, whether persons of moderate discrimination could for a moment believe that the mortality stated to be occasioned by what are termed "heart diseases," could have so frequently resulted, had medical men pointed out to their patients the probable causes thereof, and had common care been taken to avoid those excesses in diet which some medical men take little pains to discourage, either by precept or by example.

The science of medicine, then, cannot but be viewed as ambiguous in its principles, and contradictory in its statements.

How, for example, can medical men reconcile the observations and experiments formerly the boast of the learned and experienced, with the dogmas and averments of modern practitioners?

The boasted panacea of one age has been denounced as poison by the succeeding generation, and the opinions of physicians have been extolled or depreciated just as interest, fashion, or authority, may have chanced to prevail. After these numberless commotions and errors, the science of medicine stood greatly in need of more accurate methods of inquiry. It was

considered high time to recur to the precepts of nature.

Can any thing be more appropriate than the observation of Adam Smith, "that the great success of quacks in England has been altogether owing to the real quackery of the regular physicians." The Editor of the *Lancet* of the 28th of March, 1847, says, "Where one person is killed directly by quack medicine, fifty are killed remotely, or the deadly results are visited upon their children." In what ratio would the *Lancet* be pleased to fix the deaths and deadly results proportionate to each one who dies after having taken legitimate medicines administered by the legally authorised practitioner?

The community at large may be influenced by the sayings and doings of physicians! but, fortunately, in this age of improvement, these can neither blind the instinct nor bias the judgment, nor chain down the thoughts. Arguments opposed to common sense may be used by functionaries under the authority of great names; but it does not follow, that men of reflection and discernment will be hoodwinked, or will stultify themselves by a tacit acquiescence in that which their own judgment and experience unequivocally condemn.

At this moment we find the opinions on the subject of treatment almost as varied and numerous as the practitioners themselves. Witness the mass of contradiction on the treatment of even *one* disease; viz., consumption. Stoll attributes its frequency to the introduction of bark. Morton considers bark an effectual cure. Reid ascribes the frequency of the disease to the use of mercury. Brillonet asserts that it is curable by mercury only. Rush says, that consumption is an inflamatory disease, and should be treated by bleeding, purging, cooling medicines, and starvation. Salvadori says, it is a disease of debility, and should be treated by tonics, stimulating remedies, and a generous diet. Galen recommended vinegar as the best preventive of consumption. Dessault and others assert, that consumption is often brought on by taking vinegar to prevent obesity. Beddoes recommended foxglove as a specific. Dr. Parr found foxglove more injurious in his practice than beneficial. Such are the contradictory statements of medical men! Say what they will it is quite evident that only one method of treatment can be correct, and all others must be erroneous.

Rousseau showed his distrust of the entire faculty, when he said, "Science that instructs you, and Physic which cures you, are both alike

excellent; but Science which misleads, and Physic which destroys, are both alike execrable." Who will teach us how to distinguish them? The well-known assertion of Dr. Clutterbuck, that, "after a long investigation of an art that has been studied these three thousand years, there remain a great number of diseases that we do not understand sufficiently, and many more that we cannot cure, should, indeed, make men pause before they assent to any theory, however specious, or rely upon any practice, supported only by testimonials of its infallibility."

Dr. Baillie, the first man who wrote upon the importance of morbid anatomy, on his retirement from practice, admitted his total want of faith in physic, and his entire ignorance of the principles of his profession.

Palmer, in his Illustrations of Medicine, says, "A long life of undivided labour will scarcely suffice for the acquirement of even a reputable knowledge of medicine in its various branches. The most profoundly versed in its theory, the most experienced and successful in its practice, are sometimes perplexed in determining the precise seat, nature, or treatment of disease; and reduced to the painful necessity of acknowledging their want of information and deploring the inadequacy of their resources."

Dr. Akenside, himself a physician, has said, "Physicians, in despair of making medicine a science, have agreed to convert it into a trade."

Sir Anthony Carlisle said, "that medicine was an art founded in conjecture, that he never could discover any rational principle in physicians' treatment of a case, and that, therefore, it was all guess work."

The late Professor Gregory used often to declare in his class room, "that ninety-nine out of one hundred medical facts, were so many medical lies; and that medical doctrines were, for the most part, little better than stark staring nonsense."

The late Dr. Hooper remarks in his writings, "Medicine is now defined the art of preventing and treating diseases; but formerly, it was called the art of preserving health and curing diseases. The word cure, is not used at present, *because we possess no remedy capable of effecting an immediate cure.*"

The late Sir Gilbert Blane, in his "Medical Logic," says, "This, I apprehend, is so well understood among all educated physicians, that the word cure as applied to their own merits, is proscribed as presumptuous."

Majendie says, "Visit the different hospitals, and you will not fail to observe how physicians are divided between the most opposite systems, on the nature, on the seat, and even on the treatment of the most simple disease; yet each of those systems is supported by arguments more or less specious; each theory is based upon facts more or less certain."

Ignorance, obstinacy, and prejudice, were never more strongly manifested than in the determined opposition to one of the most sublime discoveries in the annals of medicine; namely, "the circulation of the blood." Incredible as it may seem, it is nevertheless a fact, (though known, perhaps, to few unprofessional men,) that this important discovery, which is now the very basis of the practice of physic, was at first not only treated with indifference, but actually ridiculed, and never thoroughly acknowledged till after the death of the discoverer. Had not that truly great man, HARVEY, differed from all the physicians of his own day, all the physicians of the present day would not have agreed with him.

We are told by the ingenious John Brown, that he "wasted more than twenty years in learning, teaching, and diligently scrutinizing every part of medicine." The first five passed away in hearing others, studying what he had

heard, implicitly believing it, and entering upon the possession as a rich and valuable inheritance. His mode of employment the next five years was to explain more clearly the several particulars, to refine and give them a nicer polish. During the next equal space of time, because no part of it had succeeded to his mind, he became cold upon the subject, and, with many eminent men, even with the vulgar themselves, began to deplore the healing art as altogether uncertain and incomprehensible.

Though I will not say with Dr. Dickson, that the whole regime of medical teaching is a system of "collusion, and tricks," and, "that the notions which have hitherto guided physicians in their treatment, are a mere romance;" yet, I think myself justified in saying, that to designate the simple questions which I have, in the "Alternative," put to the common sense of every person possessed of ordinary capacity, "difficult problems in Physiology, Hygiéne, and Therapeutics," which the faculty themselves cannot rightly understand, is a tacit acknowledgment of the unsatisfactory condition of medical science, and proves, that medical men too often subject the human body to the action of drugs to cure diseases over which they can have no control.

Is there any good reason for obscuring medicine

in a language generally misunderstood, and not unfrequently misapplied? Medicine should be resolvable into a plain matter of common sense, and its general principles be comprehensible by any one whose mind has received a moderate share of cultivation. If medicine must be taken, why should not every one know what is administered to him in the shape of antidote or restorative?

He who takes physic without being satisfied, that it is of such a nature that it cannot possibly aggravate, though it should not alleviate his disease, evidently shows that his intellect must be under the fetters of medical slavery, and guided by arbitrary law; for medical men, as I have shown, after racking their brain for ages, at last admit that they are but little wiser than they were before. The amount of their knowledge may be estimated by their own acts. "Try this, try that, try other things.*"—It cannot be denied that calomel has destroyed the constitutions of countless thousands!

A patient, according to the present state of medical practice, is presumed to know very little of

* The advice given by the *Great Napoleon* to his Physician ought to be propagated in Letters of Gold; "Doctor" said he, "No physicking! We are, as I have already told you, a machine made to live. We are organized for that purpose, and such is our nature. Do not counteract the living principle. Let it alone, leave it the liberty of defending itself. It will do better than your Drugs."

the manner in which his disorder is to be treated. Mercury, perhaps, or opium, arsenic, prussic acid, or some other powerful poison, is prescribed. Blood, perhaps, is to be drawn off by leeches, or let out with the lancet. To require a reason, or even to ask what action the medicine would have upon the body, or what would be the result of operations stated to be necessary, would, by many of the faculty, be deemed the height of presumption.

Will not the bare circumstance of the internal administration of such deadly poisons in daily use,—*observe, in daily use!* (none of which, when administered, is stated to the patient to be such) move men to reflect on the many dangers to which they must submit themselves, besides that rather obvious danger, an over-dose? What risks will not men run! what hairbreadth escapes will they not subject themselves to! and how many forfeit their lives by exposing themselves to these uncertain and desperate alternatives? In the book of nature there is no indication to use for the cure of diseases substances which contain properties far more nearly allied to death than to life. In truth no poisons at all need be thrown into the human frame, if men would but seriously learn to think for themselves, and not give a slavish assent to the dicta of others. Why should they pin their faith to the sleeves of

fallacious authorities, when they may get at the truth by a little personal examination herein fully set forth.

It appears then, that on the very first indication of irregularities of the bowels, or of any other slight attack of morbid irritabilility, many persons fly to medicine, in the expectation that it will cure them as mechanically as a clock indicates the hour, and without ever bestowing a single thought on the proprieties of that medicine on which they thus rely—how it operates on their system, or what consequences may hereafter result from the perpetually taking into their bodies substances, the nature of which, were they really acquainted with them, would justly excite the greatest alarm in their minds. No: they content themselves with the idea, that such information is the especial province of their medical adviser, in whose knowledge they make a boast of placing implicit confidence; fully believing, that he is quite aware of the action of those medicines which he gives, and that none but such as will meet their respective cases will he administer to them. If this were really so, the case would indeed be altered. To such confiding souls, it may, perhaps, appear a little extraordinary to be told, that neither medical men, nor any other persons, have ever yet discovered how medicines act upon the human

body. While, therefore, these important matters remain hidden from human knowledge, the attempts at cure with many of these substances must show that medicine frequently fails, in the very teeth of its fundamental principles.

Faith in drugs is like superstition in religion; the greater the ignorance of the devotee, the firmer is his belief. In a practical point of view, caloric, air, and food, are of infinitely more importance in the prevention and treatment of diseases, than all the articles of Materia Medica, because they are the natural agents by which all the healthy operations of life are maintained. The dread, however, of being considered "an old woman," makes many a physician prescribe a "*sharp*" dose of medicine, instead of a particular kind of food, caloric, or air.

Far be it, however, that I should be instrumental in influencing any persons to relinquish medical advice, or the taking of medicine, when it is pronounced by medical men of known reputation to be absolutely necessary in cases of urgency. My principal object is to draw attention to the due regulation of the alvine discharges by natural means, (for this constitutes much of the prophylactic part of Hygiène,) and to the imminent danger of the habitual and unnecessary taking into the body of substances that have

proved in so many instances destructive of life; for I need not repeat that deleterious medicines can never be relied on to effect a cure. Digestion is the basis of human health; and when indigestion takes place, nine out of ten cases arise from abdominal derangements, caused by a loaded state of the intestinal canal, from thoughtless overfeeding, and by indolence, and might be removed by simply lessening the food and taking such exercise as would be commensurate with the food taken. At any rate, regimen should be had recourse to in preference to taking at once mineral poisons. Vegetables, fruits of all descriptions, whether fresh or dried, and many other articles of food, may be found to effect a permanent relief, if uniformly taken, and if the mode of living according to the dictates of nature be observed. But, should there be cases where dietetic medicines have been tried and still leave the bowels deranged, why, to enable nature to resume her functions and restore the stomach to its primitive vigour, medicines that are innocuous may be given for temporary assistance. But the habitual use of even these medicines seldom fails to impair the tone of the intestines, and therefore they should be used only as the less of two evils, or when they appear calculated to do less injury than habitual constipation. In truth, when we are able speedily to dissolve obstructions, and to re-establish the excretions

by regimen, we are able also with great advantage to prevent very serious evils, and the dangers even which threaten life. To die prematurely by many years in consequence of permanent constipation, is the fate of too many; and it is evident that we may prevent the shortening of life, if, by following nature, (open to us all,) we preserve ourselves from diseases and premature infirmities of old age.

To become acquainted with the causes of disease and the means of preventing them, is all-important to mankind, they would then adopt the means of keeping themselves in sound health, and the sum of human suffering would be abated; for many of the diseases with which the human frame is afflicted, might, by calling in the aid of common prudence, be prevented; or, by a knowledge of their symptoms, might at any rate be deprived of their violence. It is by yielding to such considerations, by open dissent from prevailing practice and opinion, that every one possessing common sense, may comprehend just as clearly and with just as much capacity for observing, what constitutes health, and what is inimical to it, as most of the faculty. In the name of all that is liberal, then, let medical doctrines be displayed in their most enchanting colours. Let arguments be employed to uphold their apparent authority. Let them bring to

the inquiry their acutest penetration. Let them not allow judgment of death to go against the patient, as it were, by default. And not on the other hand, let them labour to leave an impression on the minds of men, that such and such notions are confirmed truths, merely because they issue from medical writers. Let physicians study the duties they owe to mankind. Let them teach the means of preserving health, as well as those of combating disease. Let them show, as it is in their power to do, that the taking of medicine in health in order to prevent disease, is most inconsistent and mischievous, that the surest guarantee of health is a correct regimen, and that the best treatment of even acute disease is often very simple. Let them explain to those around them, the mechanism of their physical organization. Let them expound, so far as known, the beautiful and harmonious laws enstamped upon this organization—laws as immutable in their nature and inflexible in their operation as those that hold the planetary system together. But for the sake of suffering humanity, let them not attempt to stifle examination!

In order to arrive at a knowledge by which medical men might be enabled to proceed with certainty in their attempts to cure, a *principle* must first exist, whose action must be uniform,

and such as can be relied on as producing a given result, supplying the mind with fixed data by which every fact can be tested, a line of communication on which all the facts connected with the science of health may be strung, and which, guiding the mind in all its wanderings, may prevent it from being lost in confusion.

Until, therefore, the conflicting systems that have so long distracted the world, shall be brought into one code of rules for the benefit of mankind; until the glimmering rays of light now scattered through innumerable libraries shall be condensed into the focus of a single volume, and the following points ascertained;—First the nature of organic feelings, and their precise influence in modifying particular functions.—Secondly, the nature of physical changes, and their precise influence in modifying the effects of the feelings to which they may give rise, the faculty might then proceed with some confidence to investigate the operation of medicines; but, in the present state of the science, nothing can be advanced but what is in a great measure conjectural.

It seems therefore almost self-evident, that the manner in which any particular function is deranged, can never be understood: neither, scarcely, can the manner in which any particular

derangement of function is relieved, be ascertained; because we are unacquainted with the true nature of that derangement.

The first step I submit, then, towards explaining the nature of disease, is to acquire correct views of the nature of the functions; and the first step to knowledge of the operation of remedies, is to attain an accurate idea of the nature of the disease; and not by generalizing the properties of drugs, to infer its nature from the supposed properties of the remedy—then, and not till then, will a more simple, comprehensive, and practical knowledge of the physical laws be acquired, and those laws be so understood as to be made really useful. It is useless, therefore, ever to expect that disease will be reduced, or that quackery will be exploded, until the science of nature shall be stripped of mystery, and be reduced to the simplicity of self-evident axioms, about which there can be no essential difference of opinion. Better is it that we should remain in admitted ignorance than give credence to hazardous pretentions and vague hypothesis, on a subject involved, as this is acknowledged to be, in such impenetrable mystery, inconsistency, and contradiction.

We see then that medical practice has under-

gone various revolutions, and contrary doctrines have left it in an unsettled state, in which it remains at the present moment. Not more satisfactory is a survey of the nature and properties of those substances called by the faculty *medicines*, which they have long administered, and continue to administer, with a declared view of curing disease!

What designation might most appropriately be applied to such a tissue of contradictory opinions, and to conflicting courses of haphazard treatment, which, while more frequently dangerous than beneficial to the health and lives of the community, are confessed to be all that medical art can do for suffering humanity, I leave my readers to determine.

Take away from nosology, fevers, miasmatic and contagious, accidents, and specific diseases; and all the rest may be traced to dietetic errors which it is in every one's power to prevent. In what then does disease really consist, but in abnormal conditions of the vessels of nutrition and of the blood's circulation? Now, their proper treatment embraces but a few general principles; and the remedies for those disorders are limited in number, and entirely within the comprehension of every intelligent person; therefore we are, or, if we

are not, we ought to be, competent to keep ourselves in health, little more being required to do so than moderation in diet, abstinence from spirituous liquors, the avoidance of perturbation of mind, the observance of cleanliness, and the enjoyment of pure air, with moderate exercise. These are the essential elements of health and they are at all times in our individual reach.

It is not from the doctrines of medical advisers that the public can attain a knowledge of the art of health. They do not all profess to have studied the greatest of doctrines; namely, Hygiène. It is a subject not considered of importance by medical men; yet it is one, which every individual member of the community ought to feel the deepest interest in being enlightened upon. For it teaches the undeviating course to be adopted in the preservation of health. Would it be believed that there is scarcely a medical school in this country in which any special provision is made for teaching the doctrines of hygiène, as the true basis on which a knowledge of the conditions which regulate the healthy action of the bodily organs may be applied in the prevention, detection, and treatment of disease? The chief object of medical men appears to be to discriminate and cure diseases; and thus they overlook the indirect and substantial aid which an acquaint-

ance with the laws of health would afford in restoring the sick, as well as in preserving the healthy from disease.

If medical men would become real dispensers of useful advice, and give dietetic lessons to the public, they would evince the importance of their profession, and shew themselves conscientiously alive to their real duty. The science of preserving health and prolonging life is far more important, and would be far more successful, than the science of curing disease, which is not to be accomplished by swallowing physic, but by attending to the constitutional requirements of nature.

What could be more gratifying to right-minded Practioners than to be the means of eradicating the general errors and ignorance of the bulk of the community, and of enlightening them on the subject of the organic laws; for want of which information they are frequently infringing, when they blindly consider they are obeying them. Were Medical Men to make the subject of diet and regimen their constant daily theme to those for whom they are held responsible, and not

> "For powerful poisons madly roam,
> From every noxious herb collecting death."

they would soon find it the most profitable portion of their profession. It is true their numbers would become much lessened, but such as were really wanted would be well rewarded.

To arrive at a thorough knowledge of the organic constitution of our bodies, requires, no doubt, a profound study of anatomy, physiology, natural and experimental philosophy, and chemistry. This extent of information, I repeat, is not at all required from the non-professional portion of the public, nor is it necessary for them to be deeply learned in such matters. A plain practical education is all that is necessary to ascertain a moderate acquaintance with the animal economy. Let intelligent beings themselves exert their own power, and they will find that they are capable of observing nature, and of modifying their actions, without the aid of medicine.

The respect due to medical men of talent and learning, who devote their whole attention to the investigation of the nature of diseases, with a view to the discovery of appropriate and effectual

remedies, and who pass their time in attending on the sick, and in sincere and upright endeavours to alleviate their sufferings, cannot be overstated.

Without a doubt, these men are richly entitled to rewards commensurate with the diligent and conscientious performance of their painful, and, at times, melancholy duties; subjected, moreover, as they often are, to the dangers of miasmata and contagion, to continual fatigue, to interruption of rest, to irregularity in their repasts, to privation of almost all recreation, and, in fine, braving all dangers for the relief of suffering humanity. No one standing in need of their services would willingly withhold from them a just recompense.

But, considering the universally acknowledged usefulness of this class of men, and the arduous and deeply responsible nature of their profession, is not the source from which they are usually remunerated a derogation from their dignity? And is it not equally detrimental to the community, especially the community of invalids? Was ever anything more absurd, dangerous, and unworthy, than the practice of making the amount of medical emoluments dependent upon the quantity of physic swallowed by their patients.

The regular practitioners cry out against empiricism, while nothing gives a more decided countenance to the pernicious traffic of the patent medicine warehouses, nor a more direct encouragement to the whole herd of quack-doctors than the money-scraping system of drenching patients with physic.

The apothecary estimates the abilities of the physician by the quantities of medicine he prescribes; and thus the honest practitioner who conscientiously confines his doses to the quantity actually necessary for the cure of the patient, passes, in the drug-shops for a man of no reputation. The honourable portion of that body, well know, that, under the present system of medical remuneration, it is not possible for a truly upright man to pratice conscientiously, without sustaining a serious pecuniary loss. I am quite persuaded that such portion of the profession would prefer, in lieu thereof, individuals, or heads of families, contributing to their medical attendants a sum annually, according to their circumstances in life, for which they should be entitled to medicine and advice in whatever malady they might be visited with during the year, free of any additional charge.

An eminent medical man, to whom I mentioned

my view of this subject, replied, "But the public are not sufficiently liberal towards us." I would ask, where is the rational person who would hesitate to pay his annual contribution on the ground that he had no occasion for either medicine or doctor? This would cure two evils at once; namely, the administration of more medicine than necessary, and the charge for it. Immediate attention would be secured to the incipient stages of disease, which by the present system, is too often allowed to reach its height, from the dread of incurring a heavy doctor's bill; and the poor would no longer be the victims of those inferior and comparatively ignorant practitioners who now have a direct interest in the severity and duration of disorders.

CHAPTER VI.

A concise outline of the Laws of Life.

The laws of life may be comprised almost under those of Sensation and those of Motion. Upon the exertion, therefore, of the faculties of feeling and moving which characterize living animal matter, the performance of every function primarily or ultimately depends.

VITALITY. MIND.

Vitality is one of those attributes which may be more easily described when present in an object, than accurately defined. Our very nature precludes us from any knowledge of the essence of matter, or of being in the abstract; all we can attain to, is, an acquaintance with the resulting phenomena, and the laws by which they are governed.

The vital power is that mysterious influence which pervades all living matter, imparting life,

vigour, and animation, in addition to the power sustaining existence for a limited period. It sustains man through extraordinary physical exertion, and endows his constitution with the power to resist, to a certain extent, the effects of excessive heat or cold, labour and fatigue. It can be secured in a healthy state only by the regular and harmonious action of all the functions of the system. It is subject to, and a consequence of, a due operation of the organic laws. Proper food, air, exercise, and rest, are essential to its continuance. Every circumstance, therefore, which tends to derange or enfeeble the animal functions, diminishes, in a greater or less degree, the force of the vital power. No circumstances have so great a tendency to decrease the vitality of the system, as intemperance.

Life, vigorous and healthy life, is the balance or harmony of the conflicting powers. Disease is the encroachment of one on the domain of another. Death is the final triumph of the chemical, over the vital power.

Every movement of a limb—every throb of the pulse—every beat of the heart—every thought of the mind—every feeling of the soul—wears down a portion of this living temple, disintegrates some part of the muscular or nervous system of the body or the brain. Hence, to repair this daily

and perpetual waste, we see the necessity for the ceaseless supply of new materials. Food only can answer this purpose; this, strictly, is nourishment. It is food that contributes to the building up or repair of the living temple.

SENSATION.

Sensation may be regarded as the result of changes exciting mental perception; feeling, as the effect of changes, causing only the result of impressions exciting correspondent actions, but not perceived or attended to by the mind. The cause of perception, or in what it consists, we are never likely to discover; but it is impossible to conceive that this faculty can be called forth by external objects, without some action or impression on our bodily organs. Thus the motion of the air, beating on the drum of the ear, by the undulations it produces gives rise to the sensation of sound. Substances applied to the membrane of the nose or tongue, which have chemical action on the fluids, produce the sensations of smell and taste. Experience teaches us, that the habitual use of strong stimulants impairs in time the sensibility of our organs, an effect that may also depend upon physical causes. When an impression made on the extremity of a nerve is communicated to the

sensorium, so as to excite the consciousness of the mind, it is called a sensation; when the impression by the action of a foreign body on an external part, it is called an *external* sensation; when it proceeds from some change taking place within the living system and arising from its own actions, it is termed an *internal* sensation.

As every perception, therefore, is preceded by a transient physical change, it is easy to conceive that the frequent repetition of it may ultimately alter the tone and structure of the part, as the structure of the mucous membrane is altered from constant exposure to the air. Habit reconciles us to some changes and increases our aversion to others. Thus the flavour of spirits, tobacco, opium, and a variety of what are termed acquired tastes, are far from grateful before habit has rendered them so. So close is the analogy in the functions of all the organs of sense, that tasting, smelling, seeing, and hearing, seem merely to be different modifications of touch. The tongue is touched by means of liquids, the nose by air, the ear by aëriform vibrations, and the eye by light. Sensation, on the whole, appears to be a passive function depending upon impressions received by the organs, and communicated through the medium of nerves to the sensorium, where they excite consciousness or attention in the mind.

MOTION.

Such motions of the body as can be contracted at pleasure, being under the controul of the will, are termed voluntary; and such as are excited by impressions upon the nerves, and are continually exerted without the interference of the will, are termed involuntary; and all of them are performed by contraction of the muscular fibres. But, in reality, this is only an arbitrary distinction, as no muscles act at all times under the controul of the will, but all partake occasionally of the nature of involuntary organs, the mind being often unconscious of their efforts. How the will acts in exciting muscular contraction, there is little probability of our discovering; experiment shows, however, that it acts through the medium of the nerves.

The change which the blood undergoes in the lungs by respiration, is a chemical and not a mechanical process. We have no instance of any stimulant that continues uniform in its effects, if kept for any considerable time applied to our organs. Thus our tastes are continually varying: medicines, if constantly used, either lose their influence, or produce constitutional effects; and even the most virulent poisons in time become habitual, and cease to excite irritation. Obesity, instead of conducing to strength,

is unfavourable to it; and the very means that increase the strength, remove corpulency. Indolence and sleep promote the latter; active exertion increases the former.

THE RULES OF HEALTH.

Quit your bed at sunrise; or, in the height of summer, soon after.

Immediately wash and sponge yourself all over with cold spring water; or, if you cannot conveniently do this, take a tepid bath, at least once a week.

When dressed, get into the open air; and, if an inhabitant of the metropolis or any other large town, either walk or ride on horse-back (to walk is preferable) as far out into the country as may be compatible with the necessary occupations of the day; for in the morning the air is far more invigorating than at any subsequent period of the day.

Having by this means acquired a capital, because a natural appetite, you may take a hearty breakfast; but beware of excess, and make a sparing use of animal food.

After breakfast, if business calls, it must of course be attended to; but, if not, let the middle of the forenoon be invariably spent in some vigorous exercise in the open air.

If you do not dine till five or six o'clock, you will require a little refreshment in the mean time; but a dry crust or a biscuit midway between breakfast and dinner will amply suffice, and any thing much more substantial would be really hurtful.

If your occupations are sedentary, exercise in the open air again before dinner is as essential as dinner itself: be, therefore, as particular in taking it as if your subsistence depended upon it (for your existence does), and let none but the most imperative obligations interfere.

When thus prepared, you may safely take your seat at a well-spread board and eat without stint; but still within the bounds of healthy moderation: scotch the snake (your appetite), but don't kill it.

Your dinner may consist of anything in season; but let every dish be cooked in the simplest manner.

Of all beverages water is the best at dinner:

two, or at most three glasses of wine may not do harm, but more, habitually taken, would as certainly lay the foundation of disease as that disease exists. Ale, beer, and porter, must be used as cautiously as wine: and spirits, whether neat or mixed, had better be wholly discarded; but, if you *must* have a glass of grog, let it be *only* a glass.

Both in eating and drinking more indulgence may be allowed to those who by original endowment and by wise training are possessed of sound and robust health, than to persons of feeble constitutions or debilitated frames; but experience, if consulted, will prescribe the rule, whether as to kind or degree.

At the meal called "tea," avoid strong infusions, and reject green tea altogether.

Those who dine early (say at one or two o'clock) may venture to take supper; but it must consist of something very light, and little of it.

Take care to be in bed before eleven o'clock.

Let your couch consist of a hair mattress, in a well-ventilated room, and steadily reject those hurtful luxuries, fire and curtains.

Have recourse to diet and regimen rather than to physic to rectify any disorder or trifling irregularity of the body; and never, under any circumstances, take powerful medicine, unless it be pronounced by a practitioner of deserved reputation to be absolutely necessary.

FINIS.

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